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EDUCATION AND PERSONALITY.

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IN a leading article on Education in the *Sydney Morning Herald,* of 23rd January, a plea was made for "a general re-orientation". "In America", it was said, "more and more attention is being given to the development of 'personality'. In a recent magazine article[1], Dr. Henry C. Link, Director of the Psychological Service Centre in New York, states that the understanding and testing of personality are most promising developments in the field of psychology." Here one may say at once that the so-called tests of personality are calling attention to what even the most uncritical reader might regard as the central part of the psychological field, and the serious student might well regard as exactly constituting psychology itself. That is, they are calling attention to the interplay of emotional forces that to the novice so strangely, or to the expert so naturally, makes up our "selves"; or to what, in Woodworth's happy phrase, is "the psychology we came out to see". At the same time, one may well doubt whether there is not a great deal of confusion regarding these tests as to what it is they are supposed to discover. As we shall see later, certain non-psychological factors are confused with the truly psychological; and, as a result of this, the nature of the truly psychological factors themselves is not correctly understood. If, in the sequel, we do see that this is the case, then we shall under-

[1] This is almost certainly what appears to be a specially contributed article to *The Reader's Digest* of December, 1936, as I have discovered through the kind help of Mr. J. A. Passmore. Dr. Link's tests themselves are described in the *Journal of Applied Psychology,* October, 1936. They consist of 200 items in question form, on the answers to which is based what is called a P.Q. (Personality Quotient) after the idea of the I.Q. (or Intelligence Quotient).

stand what weight to give to certain "findings" that have been based upon the application of these tests.

That the neglect of such a critical survey is likely to involve severe dangers is made clear by the way the leader writer in question continues. "It has been found, in a great many instances, that as book-knowledge waxes personality wanes; yet 'in business, in government, and in all the social relationships, a good mind or a good character is handicapped unless coupled with an effective personality'. While by no means perfect the tests that are now being made give very similar results, and these results are nearly always negative in their correlation with the results of accepted intelligence tests. The solution of this paradox, says Dr. Link—a growing intellect and a stationary or shrinking personality—is the most important problem confronting our educational leaders today, for upon its solution depends individual happiness. If the examination system, as we know it in Australia, is merely bringing out book-knowledge at the expense of personality, some change is called for."

This type of plea is frequently combined with a demand for more "technical" instruction in the schools; and so it is in this particular article, although here it is not used, as it usually is, as an argument for the former. In view of the world-wide attack on cultural education, much of it in the name of culture, it is necessary to scrutinise very carefully every attempt to modify the present educational system, in order to see that what is really cultural in our present system is not taken from it.

At first sight many of the recent innovations in English schools, the copying of which is now being sought here—the increased attention to music, both as regards execution and appreciation, to excursions to places of literary, historical and geographical interest, and to further artistic subjects, such as drawing, painting, woodwork, metalwork, needlework, etc.—seem likely to have an increased cultural effect. The aim is, it is said, to stimulate the cultural interests of the child, to develop appreciation by acquaintance with the best

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works of the various arts, and to increase this appreciation further by giving him first hand acquaintance with artistic execution; so that even though he should never succeed in becoming a first-class artist himself, he will leave school better equipped for spending the greater amount of leisure that educationalists, sometimes ironically, believe will be the lot of the newer generations.

One could approve highly of all this, provided that the gains in a newer direction are not merely made at the expense of the older; or, since school time must necessarily be limited in any one day or week, provided that what is more cultural in the older literary (and scientific) traditions of the schools is not swallowed up in a new time table, with a curriculum in which the tradition of knowledge for its own sake is lost.

It may be argued, however, that this tradition never has been part of the ordinary practice of the educationalist; that school subjects, for example, like Latin or certain branches of mathematics, have been taught not with the motive of encouraging a love of them for themselves in the child (though the teacher who is a "bit of a crank" and quite unpractical may have this love), but simply to develop the child's ability to reason, to deal with "abstract matters", to concentrate, and in general to develop his "mind". Providing the task is sufficient to tax the child, it has been said, then it does not matter what it is. Approaching the matter still partly from this angle the newer educationalist has made the suggestion that the less interesting or useful of the older school subjects might well be replaced by others which would still call for the required effort on the part of the pupil, but which would be more useful or naturally more interesting to him. Thus Greek gave way to *science*; or to keep our illustration within the bounds of one subject, the older treatment of geography, as concerned merely with lists of things, such as bays and capes, gave place to the newer economic treatment and discussion of the effects of such factors as climate; while, to take another example, the memorising of lists of kings and dates in history gave place to the study of the interplay of forces.

But to revert to the view that it does not matter what the student does so long as it is difficult, the high water mark of this principle is to be found in the recent suggestion that undergraduates would be just as well occupied in learning to play (good) bridge. (And who then could say that a university was a mere technical college?)

The second reason, then, that could be advanced by those who might wish to deny that knowledge for knowledge's sake has been part of the tradition of the schools, is that such subjects as are not studied *merely* because they are hard; for example, history, the arithmetical part of mathematics, English composition, biology, etc., are studied, not for their own sake, but for their utility. Arithmetic, on this view, is taught not in order to satisfy the child's cravings for a knowledge of number relationships, but to enable him to transact business and other "practical" operations in the world beyond the school. The teacher may facetiously (though erroneously) deny that the child has any such craving; or he may say that he tries to develop it (when he does), not to give the child a love of numbers for their own sake, but merely as an indirect means, through enabling the child to learn his lessons more easily, of helping him to "get on" in "the world".

Taken to its logical conclusion—and what utilitarian ever does take things to their logical conclusion unless in a case like this?—we may one day expect to find psychologists appointed to the schools, whose function it will be to condition the child's reflexes so that whatever love of learning as an end in itself has grown in him—an end in itself, you remember, for the child, while a means to an end for the teacher and the business community—will be systematically and carefully removed, during the period between the granting of the last examination certificate and the child's leaving school. Presumably, after the first year's trial of this scheme, employers will complain that the psychologists have done their work too thoroughly; that a little love of learning might well be left in the child, not of history, of course, or literature, or anything that might be dangerous or distract attention from

"work". "Possibly", they would say to the expert, "it would be as well to leave a little desire to excel in the simpler forms of arithmetic; and, while you are about it, perhaps in spelling or anything 'that would be of use to us'." The reader may think we are going too far along the path of H. G. Wells in our prophecy if we suggest what the employers might say at the end of the second year's trial. But my guess is, and it seems to be on safe grounds, that it would be something like this: "This scheme does not work sufficiently well. Get rid of the psychologists; we were better off as we were; even if the teachers did not concentrate sufficiently on the subjects we wanted, at least, they did understand our needs, and did not send the child forth from the school with too great a love of learning anyway."

Of course, we may be told that this is an unjust libel on both the business man and the teacher. The more advanced part of the business community, it will be said, is no longer indifferent to the advantages of even university training for its employees. Do not some universities even now provide courses in advertising and journalism? Do not even psychology departments omit anything like either a general cultural or philosophical approach to their subjects in their hurry to get on with tests and salesmanship; in their concern with methods of getting the better of the other fellow on the one hand, and with short cuts to the social millenium on the other? And do not philosophy departments pant close after, proclaiming that metaphysics must be applied to life? In other words, is there not a feeling abroad that utilitarian ends are the most important ends of learning, and that for the ordinary student all that does not lead to these ends had better be cut out and scrapped; and is not the excuse for the pure scientist merely that often pure science ultimately leads to the serving of utilitarian ends?

On these lines, the contention that a little more pure science would be beneficial in psychology could be supported by showing that the prevalent uncritical approach of psychologists to their premises leads not merely to errors in

their "results", but to errors in the application of their science. In fact, as we shall see, this can easily be shown.

It is of more importance, however, that doubt should be thrown on the belief itself that the greatest utility of a science lies in its "utility". Putting it otherwise, the view we propose to criticise is that which holds that the greatest benefit to a community from science consists in what is called its "application". But in order to make this criticism it is necessary to remove misconceptions. Let us take an example. It might be said that the most important thing for a man to do is to eat, seeing that without food man would not be able to engage in his other occupations, for he would die. That is so. But it does not follow that given a certain minimum requirement in the way of food, man's additional effort should be directed towards more food-getting rather than to apparently more notable ends, such as cricket tests. In this connection it is interesting to notice a mistake which is frequently made in criticising Freudian psychology. Food-getting, say some of the critics, is a more primitive, a stronger and a more important impulse than sex. That it is more primitive than sex in the sense of being older is, of course, true; though in the history of life it could hardly be said to be older than reproduction (for the first food-getting would hardly anticipate the first reproduction by many seconds or minutes of time—the biologists might tell us how many). But that it is a stronger or more important impulse cannot be granted so easily. For even if it were allowed (which may not be true) that up to a certain degree of satisfaction the food-getting impulse is the stronger, it does not follow that beyond a minimum degree of satisfaction of both, the sexual impulse is not much the stronger. And in this sense (with the above provision made, *causa argumenti*) it will be seen what is meant by saying that it is the more important, and also what is meant in saying that it is the more colourful[1].

[1] That the food-getting impulse at any stage is stronger than the sexual may appear very doubtful to the reader who remembers the wide definition of "sex" given by Freud.

Similarly, a certain amount of effort and time must be spent in performing operations essential to cleanliness, and in exercise, both of which are necessary to health in any individual. But it does not follow, for example, because an artist finds he cannot continue painting or writing without a certain degree of health of body, that having possessed himself of this amount, and a little more, he would be better employed in striving to obtain an increasingly greater amount than in striving to continue his painting or his writing. If it did, then a champion wrestler or lifesaver would be a nobler man than Raphael or Shakespeare. In other words, it does not follow when in order to attain a certain amount of proficiency in a direction x, it is also necessary to attain a certain amount of proficiency in another direction y, that we must regard y as more important than x (at least in any other than in a restricted causal sense); nor does it follow that we must regard the impulse to y as stronger or more important than the impulse to x, or as "meaning more to us". If this were so, though the following examples show us that it need not be so, then the digging of gold would be more important, mean more to us, than the spending of it, the building of roads more important than the using of them, or the planting of cabbages more important than the eating of them. Only those who make money out of the planting, but do not like eating cabbages, would agree to this.

Still, this can be taken to prove too much. It can be taken (erroneously) to prove that the joy of the craftsman in producing is of no account alongside of the using by himself or others of what he has made; and it would mean that the making of objects which are put to no further use is of no account at all. This even the child in the nursery who topples over a castle of bricks he has just fashioned, can tell us is untrue; and the artist will deny it utterly. And it would mean just what we are most concerned to deny, that the utilitarian conception of science is the only true one.

But what it does prove exactly, is that utilitarianism cannot at the one time proclaim that means are only important

in relation to ends; and at the same time, when the ends that it sets up are imperilled—when it is objected that artistic and scientific ends and the like are more important than these—hold in turn that because the latter are means to the former, they are more important.

The misconception, then, is this: the scientist does not conduct his activities in a vacuum. He must live, and this involves eating and many forms of activity that are to be distinguished from the purely intellectual. Also it involves the "application" of his science; and this not merely that the community may live together with the scientist, but that the latter may live the type of life that is required in a highly civilised community, that has proceeded beyond the limits of subsistence farming or subsistence hunting. The scientist and the other members of the community co-operate to their mutual benefit. But this does not mean that, the community having developed a way, by means of this co-operation with the scientist, whereby life can be maintained at a high standard of complexity, *all* the efforts of the scientist or of any other member of it, must be directed towards the maintaining of life at this standard, if it can be done with more moderate effort. That is, given that a certain interaction of scientific and other activities on the part of the citizens succeeds in promoting the necessary material requirements of the people, it does not follow that further possibilities of activity are not thereby released which may be applied to new ends, or, more simply, may not be treated as ends in themselves.

Now, it is the case that many people find that the things they do for their own sake are the things they feel really matter to them, that is, are those in which they are most interested, and which they regard as most important. Just as the psychologist may find that the sex impulse is more colourful in its co-operation with other mental activities, and imparts more tone to them than the food-getting; so these people may regard the things they like most as more to them than the mere supplying of wants which enable them to be in a state to have the enjoyment. They may even suppose that

they always or generally seek the "necessaries" merely as a means to the enjoyment; though in this they would certainly be mistaken. For what happens is that the various wants normally seek satisfaction for their own sake; and the fact that the satisfaction of some is useful to the satisfaction of others is, from this point of view, merely incidental; even though the person involved regards the latter as more important, and devotes his *surplus* effort to the enjoyment of the one kind.

Further, the utility of impulses operating for their own sake does not work merely in any direction. In strict psychological terms what happens is that there are a variety of impulses which are strong enough to function to some degree merely individually. But the individual functioning of one impulse may also serve the functioning of others; when this happens there is co-operation between the impulses. But when the further exercise of one would prevent or limit the further exercise of another, as, for example, when the student both wants to play bridge and to study, then it is the stronger impulse or stronger group of impulses that carries the day. And not only may a stronger impulse overcome a weaker in conflict, but it may also subordinate a weaker to it; and when a weaker impulse is carrying out the wishes of a stronger, the latter may even give it part of its own force, so that it operates beyond the limits of its own normal degree of satisfaction. Thus the biologist who is seeking a new species of bird, and who is also fond of walking, may walk for miles further than he ordinarily would, without noticing the least mental or physical fatigue or desire to give up, just because he has not found that new specimen yet.

While, then, the various impulses seek their own satisfaction, and in doing so are either necessary or obstructive to one another, there are certain impulses which we regard (according to which ones are strongest in us) as more important for enjoyment, especially when there has been a more or less minimum activity all round, or nearly all round, because some activities we try to inhibit altogether.

After this psychological interlude, what is the main argument? The first point we would try to establish is that even for those who would tolerate the desire to learn or to inquire for its own sake, only on the grounds and to the extent that it makes the learning of "useful" lessons easier to the child, or keeps him applied to "difficult" tasks, or leads to the making of "useful" discoveries on the part of the scientist, it can be shown that there is a value to the community in people enjoying the spending of their leisure or surplus time in interesting recreations. More and more there will be a limit to the amount of time and the amount of organisation that it will be possible to apply to the things that the inartistic and the unscientific could regard as "useful", that is, to things that are useful to neither of these ends. (Unless, of course, military preparations—but there is a limit to that too.) In other words, there is a limit to the production of food for a community, unless the table is to become more refined, that is, more artistically devised. There is a limit to the amount of housing unless the houses are to be finer made, to the amount of clothing, unless the clothing is to be finer made—not more durably made, for a leather suit would last a man's life, but more æsthetically.

That is, further occupation can only be given to the making of what our supposed inartistic and unscientific friend could regard as useful, by paying attention to those very qualities in which he would not be interested. But if we are to seek beauty in these things merely to give us more occupation—if the search for beauty in the complication (or simplification) of things is thus found to have a "use"; then the question arises why should this search be limited to any one of its manifestations. Will not art when divorced from such considerations as decoration of housing, clothing or feeding, have the same use? And if the plastic and allied arts, not the literary? And if the literary arts, not science?

There is the further consideration that art cannot flourish in a community that does not encourage pure inquiry, But that does not concern us here, because we do not want to

present pure inquiry merely as a means to artistic ends. We want to show that it has a value to the community merely as pure inquiry, and that quite apart from what other uses it may have incidentally on account of its influence on applied science and on artistic efforts. An interest in things for their own sake is something that must be given to the modern child if he is to take his place in a highly complex society. It can no longer be merely in the prime necessities, but in the things that the modern man will regard as more important than these. It may be in sport, it may be in art, it may be in inquiry. That it will have to take one or more of these forms is certain. Which form or forms is another matter. But it is the strict duty of those who have scientific interests at heart to assert and proclaim that this interest is equally meet with the other two to fulfil this growing need. That its operation may be free and unhampered it is necessary to see that the child is given every encouragement for its development, and that every step that is taken that might endanger free inquiry shall be watched and checked, and where the complete checking is not possible at least opposed.

There will always be a great proportion of people, even a great proportion of university students, who will make no new advances, provide the scientific world with no new discoveries in the field in which they are interested. Still, for the most part, what any individual person may do in this way cannot be determined in advance; and no steps should be taken to preclude persons going on to make discoveries. Indeed, the only way of teaching a subject at all culturally is to treat the student, not *de haut en bas,* but as a fellow investigator, who is to be put in the way of advancing step by step through the science from premise (including observations) to conclusion for himself. Thus, at each stage, all types of students should receive the same general type of training, even if some do their work more intensely than others. But it remains that a great number of persons will never add to the total body of scientific knowledge. And the question can be raised what type of instruction would most profit these. Remember that here we

are speaking of profit for leisure, and not in any utilitarian sense beyond that. In the modern world, it is said, the functions necessary merely to sustain life will be supplied with more and more decreasing effort. Consequently, it will become more and more necessary to find occupation for leisure. Such occupations will take the broad divisions of sport, art and learning. The divisions may not be exhaustive, and certainly are not independent. Thus there is both an artistic and an investigational aspect in games and sport. Ask any cricket supporter or bridge analyst. Indeed, the enthusiast in chess problems finds his interest mainly in the artistic and scientific side; and, contrary to popular notion, difficulty of solution, in which the fighting impulse is most simply expressed, is altogether subordinate to both economy and other æsthetic considerations and to discovery of new themes and further development of old ones. As a development of an indoor game these considerations are possibly more marked, but they are strongly present in outdoor games too at their best.

Nor, as we pointed out before, are these interests entirely divorced from the demands of eating and drinking, clothing, housing and the like. Art may find expression in the fashioning of a drinking goblet or the more choice assemblage of food; so can science. But what we wish to stress is that we are no longer concerned with mere eating or drinking. We have added artistic and scientific interests. Though the co-operation has come about partly for the sake of our pleasure in the former, it has also come about largely merely on account of the need for finding satisfaction for the latter interests themselves. And, again, we must stress that this means that since we have left again what the narrow utilitarians would call the "useful" sphere, we are at entire liberty, just as a matter of consistency, to disregard them from now on altogether. We may advance the claims of science solely as a means of satisfying the scientific impulse, without further justification. We may ask that the child be assisted in developing love of learning merely for its own sake. We may ask that the educationalist recognise, or be allowed to recognise—for,

despite our libel (which it will be noted, was really that of our opponents), he does do so—that, in the sense outlined above, the demands of the business world are *not* the most important demands on the school.

What now of the direction that this wider scientific training must take? Those who seek to explain (and excuse) the teaching of biology and geography and history (when not mistaught in the interests of a group), solely because they help the pupil in the business of "getting on in the world", forget two things. They forget, for example, when they say that "the only reason for teaching history is that the successes and mistakes of the past form 'lessons' for the present and future", and that if this were not so, "history need not be taught", that the satisfaction of a natural spirit of inquiry has a value for itself, and thus an importance of its own, which is not to be measured in terms of what further value the gaining of knowledge may have either for the maintenance of the individual or for his other impulses. Secondly, they forget that the main early interests of the child will be in just those subjects which are of use in orienting him in the world, just because they are about the world in which he finds himself and in which he is therefore curious. For this is but another example of the way in which impulses which are independent work together in co-operation and to mutual assistance. *A priori,* there is no reason why the impulse of curiosity should work one way rather than another, nor be interested in one thing or aspect of a thing to the exclusion of the next. In the very young child the matters about which he can be interested are limited, of course, by the lack of development of his intelligence; and the things he picks out to ask questions about are often those with which he comes into some sort of contact that is directed in part by other interests, such as the social. But not always. The child is interested in many things apparently just for their own sake; though he may turn from them later, as the interest in things he can use can become reinforced by the interests that are concerned in this use. Hence the native intellectual interest becomes directed to special spheres; which is the

reason later why one university student studies chemistry and another history. But the native curiosity is still native curiosity and should be recognised as such by the teacher and fed for its own sake. Indeed, it is a most important function of the parent and the teacher to see that as the child grows older the intellectual interest is allowed as free development as any other, and that owing to its satisfaction being so often bound up with the satisfaction of other interests, it is not entirely subordinated to these others and so stunted or dried up.

It is in connection with the further development of the interaction between impulses that the question of so-called technical education arises. To many of us there seems to be a great danger for free speculation and inquiry present in the current increased demand for more technical education. In part our apprehensions are raised by the type of persons who make the demands. Often these persons are apparently uncultured in themselves, and appear to have little or no apprehension of the value of cultural training for the child. Sometimes this apparent lack of appreciation is covered over or partly excused by the statement that the special technical curriculum is not intended to apply to the child that is going on to the university. To a smaller degree only our apprehensions are allayed by the teachers, who frequently have sufficient interest in the cultural interest behind them to hold that their primary object is not to fit the child for a trade, so much as to awaken his interest in the ramifications of the fields of knowledge that are connected with the given occupation. So long as the schools can resist the efforts to turn them into business colleges that is to the good. Neither culture nor the spirit of inquiry is something that is cut off from particular occupations; and it is most natural and desirable that the person in whom this spirit is well developed should apply it to the ramifications of his occupation, not merely with the idea of "advancing" himself in it, but with the idea of appreciating its place in and connection with the system of knowledge he has acquired about the world in which he lives.

It is this spirit which should distinguish the school from the business college; just as it is, rightly or wrongly, supposed to distinguish the university from the technical college. But the question arises whether it is best advanced by the provision of special technical schools for the child in the pre-intermediate period, with the consequent distinction between subjects that are fit for the child only who "is to proceed to the university" and subjects fit for the child only who is not. It is not that one child "will go further than another" that matters at this stage; it is that all children should be given an equal opportunity to form an acquaintance with those parts of knowledge that are of the most general cultural value, and brought to feel that these are someting to be appreciated for their own sake, and to be followed further in their leisure time through life. It is not again that this cannot be done at the special technical schools, although it cannot be done so well. Again, it is not desirable, whatever psychological tests may or may not be able to do, that large numbers of children, and if certain persons are to have their own way, increasingly large numbers, should at an early age be drafted to special schools away from where the most stress is laid on cultural learning, and where the child will have the greatest opportunity to show his ability and worth in it, and be best enabled to proceed further in it. In the last resort the matter will come down to class distinction, and much of the good that the high school system has done will be removed. In order to secure the correct stressing of the importance of education in the community as a whole, and not merely in one section of it, this distinction should not be made. Technical training, of course, there must be, but the question is whether the approach to it in the earlier years should not be made through the general cultural subjects of history, geography and science, which would be taught alike to all school pupils without segregation. And in order further that emphasis on the value of general culture be kept before the eyes of the community in general, an effort should be made to bring about some connection between the child who has left school and not

proceeded to the university, and a body concerned with the further enjoyment or study of one or more of the general subjects, literary, historical, scientific and so on.

The great majority of university students, we said earlier, while their independent discoveries will be discoveries for themselves, will never advance even up to or extend the known boundaries of the scientific world. They will never even "use" all they have to learn, beyond finding in it its own use. The question arises, then, whether the scientist who is busy pushing on the boundaries of his science, could not stop and spend more of his time in working out a more general treatment of his science for the sake of these students, that in their education at least a more cultural aspect might predominate. That is, it is asked that a little less attention be paid to more special problems, and a little more attention to the wider ones. The reader who is acquainted with the American and other text books on psychology might call it especially to mind; but the remarks apply equally well to other subjects, such as biology, mathematics, physics, physiology, and to those branches of learning that are not usually called sciences, but are capable of scientific treatment, such as literature and history.

This is, of course, a plea for the working out of logical and philosophical foundations and connections. But it is something from which the more as well as the less advanced worker in a science will reap profit; and the time spent in a criticism of categories that can no longer stand will mean an ultimate saving of time to the scientist. With the latter's plea for freedom of investigation from working in the shackles of the mediæval philosophy, I am in sympathy. Because that philosophy was in my opinion a bad one. But the scientist still works in the categories of that philosophy, and has never attained to that freedom, just because he must work in the categories of some philosophy. Generally he has a very imperfect knowledge of any; and so he accepts certain positions as ultimate, without being aware that they are derived, and derived, moreover, from positions which he would reject if they were made clear to him. This means a certain stultifying

of his subsequent work. What is required both from the point of view of general culture, for a free satisfaction of our interest in the nature of the world, and from the point of view of advancing our special interests in a science, which, indeed, is a part of the former, is that the attention of the scientist and the student be drawn to these questions, and that they should be worked out clearly; so that both become aware of what they are doing, and are not facing in one direction while they believe they are going in another. Proceeding in an ostrich fashion can at most lead to a spurious or imagined freedom; and since this is so, what the scientist should work for is not freedom from logic, but freedom from error. All questions concerned with a branch of study are equally concerned with knowledge; and to the investigator whose prime concern is knowledge, it should hardly seem worth arguing that questions of fundamentals are equally grist to his mill.

According to certain reports the study of philosophy and logic is now being undertaken to a greater degree in some of the English schools. It may be doubted whether the advance in this direction has been very great; and the full discussion of this question demands a separate article. But it should be clear in the light of the foregoing treatment that the need for an introduction to these subjects in the schools is very urgent. There are two main aspects. First the necessity for a more rigorous training in the nature of argument generally than is given at present. In these days of the worsening of the Press, and when few Press articles do not contain several fallacies of the simple text book type against which even the elementary student in logic has been warned, the need for a general logical training is strikingly apparent. Secondly, there is the question with which we have been mainly concerned here; the need for the indication of the fundamental problems in a science, and for an awakening of an interest in the fundamental connections between sciences. Without this there can be no proper discussion of the problems that arise in the teaching even of history, literature or art. In the absence of this knowledge the only recourse for the teacher and the pupil

who are concerned with the question of what constitutes good literature or good art, is to that type of faulty relativism (the "opinion of good judges", the "recognised masterpieces", etc.) that is so common in the newspaper reviews. And something better than this is required both for the teacher who is genuinely interested in his subject, and the child; and also for the public.

What now is the main outcome of our discussion? It is that the value of free inquiry and general study must be maintained to the uttermost in the teeth of all the attacks that are being made on them. These attacks come from many sides. In the first place the schools must be careful not to fall into the production of mere "artiness". If the appreciation of art is the main function of the elementary art classes, then it must not be at the expense of scholarship; for such scholarship is just what is needed in order that the child may develop along with it a love of learning and a spirit of investigation, which is just what is needed in order that artistic appreciation may function adequately. And in the realm of the production of art itself, good art is dependent likewise upon the existence of a developed spirit of free inquiry.

Also there is danger lest the demands for technical education be over pressed, and from utilitarianism in all its forms. It is not a matter of not meeting the claims of the utilitarian in what the educationalist believes to be worthy ways; the danger is that the relative importance and value of the various interests that make up human life may be distorted, or even sacrificed to short views. Finally, exactly the same kind of danger exists in the scientific world, where the scientist is frequently laudably anxious to solve pressing problems, but takes too short a view as to how this is to be done, and overlooks the value of *truth* in the sciences as such.

THE FRAUD OF "PERSONALITY".

That the demands referred to are not merely either unthinking or furtive attacks upon scholarship is shown by their frequently being coupled with a direct attack upon it. "If the

examination system, as we know it in Australia, is merely bringing out book-knowledge at the expense of personality, some change is called for", it was said. But, as it happens, most of the current talk about personality and individuality is so much cant. In reference to these notions, too, we can point out what is uncritical and shortsighted in the psychologist's method of proceeding to deal with special tasks without having made a fundamental logical analysis of the matter which he is attempting to treat.

These remarks must not be construed as in any sense an attack on the scientists themselves, nor upon the general principles of psychological tests. What is keenly desired is to show in what way it seems to the writer, advantage may be taken by workers in this field of what logic has to offer; and also to point out the dangers to what the scientist and the educationalist should hold most valuable, which exist in the neglect or failure to take advantage of this discipline.

Now, personality is often supposed to be something a person "has". If so, then it is simply his character. But this is another term which has been very loosely used, particularly in recent attempts to undermine the system of State education. The character of a person is not something like a Platonic (*sc. Socratic*) ideal, or universal, standing over that person, but simply his nature or qualities. Just as the character of a table is the nature of that table, the quality or qualities that make up that table. So, too, the character of a person consists in the qualities that that person has. We may refer especially if we choose to his mental qualities or characters; and it is these that we deal with in ethics, and can describe as being either good or bad in the absolute sense. Now, when it is said that the schools should develop "character", the question to be asked is *which* character, or which characters. If we decide that we want to develop good characters, then we must decide which characters are good in themselves, or have the further character of goodness; just as a mathematical figure which has the character of triangularity may have the further character of being right-angled; which is the only treatment of goodness that does not fall into

relativism. Now, if it is decided that the urge, or desire, or love of investigation is a good character of mind, then, when it is said that the schools should pay special attention to the development of character, the question arises whether this is not pre-eminently the character to which this attention should be paid; whether the impulse to learning is not the character which it is the place of the schools to develop. Though this, of course, cannot be done *for* the child in a drill-book fashion. But conditions can be made so that the child is given every opportunity to develop this character in himself.

In so far, then, as personality means character it has been sufficiently treated, and many of the arguments in which it is used discredited. But this meaning is confused with the notion of the impression which one person is said to make on another, the responses he evokes in another person. This meaning confuses the character of a thing with its relations, and the character of a person with his relations. It is this confusion which is at the root of many of the psychological tests, and which needs to be made clear so that the errors it is responsible for may be got rid of. It is natural that the person who has devoted his affections to investigation rather than to other interests should fail to evoke responses in other persons who have not so devoted their affections; just as these other persons fail to evoke the responses in him which they might wish. But the way a man is to be judged is not by a relativism of this sort, but by the characters of his mind; and if the schools develop the mental characters that are themselves good (among which we have pressed the claims of the investigatory impulse for inclusion), then they are performing their duty.

Now, Dr. Link, in discussing his set of tests, defines personality as "the extent to which one is able to interest and influence other people". Treated in this way it is not something which a person "has" at all. It is not something that can be developed "in" him. Instead, it depends upon the relations that exist between him and other persons; and these relations are adventitious: they depend in logical phrase upon the nature of their terms. That is, they vary according to

what type of persons it is that is being related, and then, again, in what circumstances. The scientific and educational tricksters of the Greek classical period were the Sophists. They taught their students first and foremost how to play upon the feelings and ignorance of the students of the other Sophists and of the unsophisticated public. Their work was to produce the champion "personalities" as viewed by the current standards. Socrates must have had a "good" personality also, for he had many supporters; but then apparently he must have had a "bad" personality, for in his relations with most of the Athenian populace he did not, to use Link's phrase, "interest or influence other people in getting a job or a rise in salary, in making or keeping friends". The young student of the Sophists, however, to make up for this, would have "the habits of remembering and repeating good stories, or introducing people to one another, of going round with a group of friends rather than a single one, of paying compliments to people and refraining from so called frank criticism of other people, of trying to meet people, of serving on committees"; and doubtless have a high personality quotient. (Probably, though, he might be allowed to indulge in a little frank criticism of people with whom it did not *pay* to get on, or from whom there was nothing to be gained by paying compliments.) If this is the sort of thing that book-learning discourages, then hurrah for Euclid!

Hurrah, too, for Logic! A knowledge of the logical fallacies (including the sort known since Aristotle as sophisms) should decrease one's personality by fully fifty points (unless used for purposes of deceit, in which case they should increase it).[1] There is nothing that "interests or influences

[1] This is what the students of the Sophists did, *viz.*, increase their personality (their influence upon other people) by the use of bad argument; and it was for this end that many of them received lessons. It is clear that the education of the go-getter or the tub-thumper or his ilk cannot be made the aim of the schools—nor, since it is not always the loudest that goes the furthest, of the more subtle members of this type. But there are many subtleties of character that should be developed, and are developed by book-learning, and yet which may not directly *move* many people. The test of education is not then Dr. Link's. But if it were the case that it is the aim of the schools to develop "personality", then they should first develop the type of people who were to be *moved* by their subsequent graduates. But then the current P.Q. tests would be out of date.

other people" like bad argument; especially if there is plenty of soul-stirring but thinly disguised appeals to self-interest. We have only to think of the functions of bad argument in politics.

The educationalist may, however, remember that if two persons have highly developed interests in common, though they may appear insipid to others, they will have what might loosely be called a "high personality" for each other—for example:

"There was a lover and his lass"—

and then he will concern himself with those interests which are of greatest value in themselves.

The interest of the lover and his lass in each other may wane if they have not other interests, as Dr. Link in effect points out. But whether these other interests should be in "the possible winners on Saturday", a knowledge of which might give them a higher status in some circles, or of what we would have the schools encourage (in which case their standing would depend upon among whom they mixed), is something which is to be decided quite apart from the P.Q. tests. (And this is so, even if the example given be over-simple, and it could be shown that as a matter of fact, according to certain tests, race tipsters have a lower P.Q. than other people. I mention this in case the example be attacked in place of the principle.)

Whatever value these tests may have, even if they mark an advance in this type of psychological testing, it is in telling the psychologist what interests a person has; and from a study of these he may tell how the subject is likely to get on in certain situations. But they will not by the addition of the answers give an index that can be taken as an index of "personality" in general or as apart from special circumstances. Just because there is no such thing as personality in itself; and just because there are no special sets of relations —not, it is to be noted, which the subject has to his fellows, but which they have to him, regardless of circumstances.

In defence, it might be said that the P.Q. tests are concerned with an average of action in multiple situations. But

the same general objections still apply. In an educated community the type of person who would have the most influence (again, in given situations) would not be the same person as in a less cultivated community (in, as near as possible, the same type of situation). He might not even be the best person in that community, nor need he be the person who might have the most influence if its members were still more educated. Nor, for that matter, can there be such a thing as an average of situations in any community. There is no way of making a selection. Should, for example, we give more weight to situations involving cultured relations or uncultured? And if to the latter, how can a low P.Q. be taken as a criticism of culture? The suggestion is absurd.

REASON AND INCLINATION.

By J. A. Passmore.

If ethics has as its object the establishment and justification of the moral law, then it cannot avoid postulating ultimates. When, under ordinary historical circumstances, we endeavour to justify a law, we have always a certain audience in mind, and we seek to demonstrate that the law serves a purpose approved by that group or flows from a source which it respects. On the other hand, the moralist takes all humanity for his province, and strives to discover a justification which will be accepted as such by any "rational being". Thus his concern is to present an end which none could possibly reject or regard as a mere means, or an authority whom none could help respecting. He endeavours to forestall the critical enquiries "why should I pursue this end?" or "why should I obey this authority?" by reference to an object which is ultimately an end, a final purpose of human striving, or an authority which is ontologically established as self-authoritative.

In demanding such ultimates, the moralist is not merely hindering the development of a scientific ethic, but is affecting the development of intellectual activities generally. The scientist cannot readily resist the pressure of the moralist, not merely because he has been educated to accept the moral code which is being justified, but also because the moralist appeals to whatever is anti-scientific, prudential and compulsive within the scientist himself. Thus the conflict between moralism and science should not merely be presented as an opposition between the moralist and the scientist; the enemy is within.

While moralistic considerations can affect even a science like physics (in the theory of a closed universe and the principle of indeterminacy), their influence is especially strong in the sciences of human behaviour, biology and psychology. In psychology especially, Freud has made it clear how the establishment of a law within the soul by means of repression distorts our conception of our own mental processes. The theory of faculties is an excellent example of such a mere pretence at speculation which, with nothing to recommend it theoretically, has survived innumerable assaults just on account of its suitability for moralistic purposes. Pretending to give an account of the mind, it leaves us with a system of mysterious agencies, of which it gives no positive description. Thus reason is that which speculates, will that which activates, consciousness that which knows, and the real psychological issue, *what it is* which speculates, activates or knows is left quite undetermined. To give any further account of these processes, to demonstrate their connection in definite ways with definite forces within the mind, while it would constitute psychology, would rob moralism of its mysterious ultimates within the mind. Until such faculties are finally rejected, I would contend, progress is equally impossible in psychology and in ethics; and the position remains the same whether we regard the faculties as separate sources of activity within the mind, or, on the more sophisticated but logically equivalent theory, as manifestations of a self which is itself conceived merely as "that which persists" behind mental activities.

Examining in particular the faculty of reason, we find, in the first place, a certain difficulty in determining what activities can correctly be ascribed to the operations of this faculty. At one time, reason is regarded as the source of all abstract contemplation, at another as the source of, or guide to, whatever is moral within the soul. Even where "pure" and "practical" Reason are explicitly distinguished, we are yet to understand that both are in some sense "rational", being manifestations of a "rational self" which can operate either theoretically or practically. This confusion of functions is

by no means an accidental ambiguity. For whereas it is not very plausible to claim that a faculty which we observe to be supporting a certain line of action is in any sense impartial, it is necessary to make this claim if morality's authority is not to be regarded as the mere expression of certain interests, and pure reason can much more plausibly be regarded as impartial. Again, the theory of necessary or self-evident propositions carries more conviction than the supposition that certain commands are necessarily binding; so that Reason as the source of necessity in propositions is called in to bestow necessity upon commands. Finally, the moral law is supposed to be bound up with the nature of things, so that moral action is peculiarly logical and the mere discovery of facts becomes tantamount to the acceptance of commands; a theory which necessitates the conjunction of the discovery of truth and the promulgation of morality in man.

It is just this illegitimate combination of a general interest in truth and a special interest in morality which lends to rationalistic ethical theories whatever plausibility they possess; but the illogicality of any such a welding of functions is the first point that can be made against an ethic of this type. Reason can only interfere in action if it is partial, or desirous, i.e., if it is on the same logical level, and of the same general kind, as the inclinations it is regarded as opposing. Interference in action, under any circumstances, involves choice; and "election", as Hutcheson pointed out, implies "affection". Unless we abandon the pretence that reason is impartial, we can never show how it could interfere in one direction rather than in another. If reason is to oppose inclination, this implies that reason rejects the objects of inclination and sets up against them its own objects. Even if the objects of reason differ in logical order or range from the objects of inclination, they must still be limited, e.g., if reason opposes inclination because the objects of inclination are particular, this can only be because particularity can never be an object to reason. Again, if it is possible to distinguish the rational from the irrational in any opposi-

tion within the mind, we must be able to discriminate the rational activity as a peculiar (i.e., limited) type of mental activity, with its own characteristic ways of behaviour. Now, when we say that a mental activity is a desire, we mean only to affirm first, that it is a movement in the mind; secondly, that it is distinguished from other such movements; thirdly, that it seeks an object in which to terminate; fourthly, that its range of objects is limited. All these conditions must be satisfied by reason, however the moralist tries to conceive it, if it is to conflict with the passions of the mind. It is mental, and must be a distinguishable type of mental activity if we are to discriminate it from the passions it opposes; and, again, if it is to oppose passions it must be because it seeks different objects; and, finally, whatever these objects may be, they are not the objects of any non-rational inclination, and thus reason must have a limited range of objects.

If, in response to such criticisms, it is insisted that Reason does not actively interfere in the politics of the mind, restricting itself to the issuing of precepts which may be accepted or rejected by the passions, then it is impossible to avoid Hume's conclusion (following Hutcheson) that "Reason, meaning the judgment of truth and falsehood, can never be any motive to the will". Such a conclusion is itself untenable, because if reason (or speculation) is a process which goes on in minds, then it is bound to react upon its mental context, but it follows inevitably if we postulate an impartial faculty for the judgment of truth and falsity. Hutcheson is opposing the type of argument maintained by Clarke, namely, that "'tis as natural and (morally speaking) necessary that the Will should be determined in every action by the Reason of the thing, and the Right of the case, as 'tis natural and (absolutely speaking) necessary that the Understanding should submit to a demonstrated Truth" ("On Natural Religion", §III). Thus Clarke considers that our judgment "X is appropriate in these circumstances" must "determine the will" in the same way that the demonstration that X is Y compels us to accept this proposition as true. In modern times, the argument takes this

form: that the judgment "X is good" necessarily determines us to action in exactly the same way as a necessary judgment determines us to believe it.

Now, in comparing moral and logical necessity, the rationalist tries to make it appear that there are precepts which we cannot help obeying, or ends which we cannot help pursuing, just as he claims that there are propositions which we cannot help believing. Nevertheless, in distinguishing "moral" and "absolute" necessity, Clarke is virtually admitting that we do not always obey such precepts. The notion is, however, that if we inspected them closely, we would be bound to accept them, so that evil is the fruit of "irrationality", i.e., of a failure to see the facts clearly.

What Hutcheson argues is that a "truth", i.e., a true proposition cannot, as such, induce us to act in one way rather than another. "That Conformity which is between every true Proposition and its Object cannot make a Difference among Actions, or recommend one more than another either to Election or Approbation, since any Man may make as many Truths about Villany, as about Heroism, by ascribing to it contrary Attributes" ("Illustrations upon the Moral Sense", §I). In other words, the mere fact that Heroism is good could not, of its own account, induce us to be heroic; and this truth is no more "natural" than the discovery that "Villany" is evil. Certainly, knowing that courage is good, our conduct might be influenced to some extent, and we might "take up morality", but equally knowing that chemical experiments are spectacular we might be induced to take up chemistry. What is important is not the "truth", but our discovery of the truth, and this is only important because it reveals a certain amount of interest in courage or in chemistry. If we discovered truths by the operation of an impartial faculty, then the discovery that courage is good would be purely accidental, and could not be determined by the presence in us of motives with interests in this direction. Under these circumstances, Hutcheson's position would be irrefutable; we deny it now just because we recognise that only a man of a certain character could make

the discovery that "courage is good", and this discovery, as being the work of certain motives, is bound to influence his behaviour.

It is not a question, then, of the discovery by reason that courage is good, bringing into birth an interest in courage; such a discovery could only be made by a man who already had a certain interest in courage. Now, admittedly this discovery may increase the force of whatever motives are courageous within the mind by winning the support of those motives which have a special interest in goodness, but moralists certainly over-emphasise the force of our ethical interests and such a discovery may have little or no effect upon our behaviour. As Professor John Anderson has pointed out: "People in general do not think very much about the goodness of their activities. They are simply to be found trying to make discoveries or to produce works of art, exhibiting love or courage . . . because they are made that way" ("Determinism and Ethics", *A.J.P.P.*, December, 1928). The opposing view that the discovery of X's goodness must immediately induce us to pursue X is based upon two assumptions, first, that goodness always appears as an end, and secondly, that goodness is *the* end of human activity. Thus it is maintained, in the first place, that courage or the love of truth or human affection always appear before the mind as ends, or that they are developed just by being taken as the end of other activities. It is even argued that ethical theory must precede ethical activity, that we are not moral unless we recognise the morality of our procedures—though how there could be any morality to recognise on this theory of the matter is never explained. But, first, there is no distinction between ends and activities. It is clear, for example, that even if we can deliberately set out to establish a love of truth in ourselves or in others, what we are establishing is just an activity, and that we can promulgate it simply because we are aware of a love of truth as one particular sort of activity, occurring under definite conditions, and having its own energy. Unless, in other words, we are aware of goods as activities in their own right, which can look after themselves

without being consciously supported, there would be nothing for us to support or establish. We might even go further, and maintain that good activities are commonly supported, not on account of any special recognition of their goodness, but by the operations of other goods in the natural course of their activities, because, as Socrates suggested (*Republic,* Bk. I), goods find it possible to work together in harmony.

Secondly, and this is Hutcheson's point, the discovery that X is good will not induce us to choose it unless we have an affection towards goodness, just as the discovery that "chemistry is spectacular" will not lead us to take up chemistry unless we have an affection towards the spectacular. The opposing view that we cannot help pursuing courage, if once we recognise that it is good, only has plausibility if it be assumed that goodness is merely equivalent to "the demanded". Otherwise, we can quite well admit, e.g., that æsthetic creation is good, without sitting down to compose a poem. And, of course, if "X is good" means nothing more than "I demand X", or "my rational self demands X", then admittedly we cannot judge that "X is good" without simultaneously wanting it. But, under these circumstances, it is not merely the discovery that "X is good" which determines us to action; it is the demand for X which we have discovered ourselves to possess, which is the real determinant of our action.

What is being objected to is the theory that a deliberative reason presents the products of its deliberation to the affections as a purpose, reason, or "motive" for action. The product of deliberation might appear as a "reason for action" to an affection which could take such a product as an objective and then the product might be said to "compel the attention" of the affection; but this is in so far as it is material for the affection, and not in its capacity as a product of deliberation. The "product" makes its demands, then, just in virtue of being the sort of situation it is, in the context in which it finds itself, and not because it is peculiarly rational or good. We are not involved in the conclusion which Hobhouse derives from an argument similar to ours: "On this way of thinking

the reasons that we give for actions are merely *ex post facto* formulæ for the impulses and emotions that really prompt the act. The impulses are not based upon the reasons, but the reasons upon the impulses. A man may think he loves a woman because she is beautiful, but in reality she is beautiful to him because he loves her" ("The Rational Good", §I). Such subjectivism does not in the least follow from our argument. The fact that a woman is beautiful does not constitute an obligation upon us to love her, and we are no more "reasonable" if we love a woman because she is beautiful than if we love a woman because she is an Eskimo. When we give as a reason for our love the fact that the woman is beautiful, the question could easily be asked "why do you love beautiful women?" and if this enquiry is not often made under these circumtances, it is not because our love for such women is peculiarly rational, but merely because we accept such an attraction as being "natural", i.e., as occurring in the common run of events. To give a "reason" for action in this sense is merely to connect our behaviour with the *mores* of the community. Now, such a "reason" is not the cause of our love, although it might be a condition of our love. We might not be able to love the woman unless she is beautiful, but her being beautiful does not immediately imply that she is loved, i.e., equally, her beauty can only condition our activity if we love beauty. Thus the argument between Hutcheson and Clarke finally involves us in the conflict between the teleological and determinist theory of causality; and if we accept Hutcheson's argument we are bound to reject the whole theory of "rational determination".

We can approach the matter from another angle by considering theories in which deliberation is regarded as opposing the passions, rather than presenting them with motives to action. Thus, according to Sidgwick, "everyone . . . has had experience of what is meant by the conflict of non-rational or irrational desires with reason: most of us, e.g., occasionally feel bodily appetite prompting us to indulgences which we judge to be imprudent, and anger prompting us to

acts which we disapprove as unjust or unkind. It is when this conflict occurs that the desires are said to be irrational, as impelling us to volitions opposed to our deliberate judgments" ("Methods of Ethics", Bk. I, Ch. III). Our point here, however, is that the judgment, for example, that "intoxication is imprudent" is in no sense opposed to the operations of an inclination for intoxication. Conflict is only possible between desire and desire or else, in a logical sense, between judgment and judgment. If, in order to become intoxicated, I was obliged to formulate the judgment "intoxication is prudent", i.e., if it were only possible for me to undertake a course of action if I imagined it to be prudent, then I should be formulating a judgment in opposition (viz., contrary opposition) to the judgment, "intoxication is imprudent". But, fortunately (unfortunately, according to Sidgwick), our lives are not wholly directed by prudential motives, and it is simply not the case that in undertaking an activity I simultaneously judge it to be prudent. The conflict, if there was any, could only be between *whatever judged* that intoxication is imprudent, i.e., whatever motives oppose intoxication, and whatever motives support it. We can speak of our deliberate judgments opposing volition, then, only in the sense that if we can judge intoxication to be imprudent and yet at the same time become intoxicated, then there is certain to be mental conflict, an opposition of motives, on this subject within us. The conflict, however, is simply between whatever supports intoxication and whatever opposes it, and it does not follow that whatever opposes intoxication is peculiarly rational unless we make certain assumptions which seem to me quite unjustified.

First of all, it might be assumed that whatever is capable of exerting opposition or of hindering is for that reason rational, this being equivalent to saying that what is rational is peculiarly authoritative. Thus, Socrates argued that when people are thirsty and yet decline to drink "there is that in the soul which orders them to drink and there is that which hinders them from drinking, the latter being distinct from and master of the former" (*Republic* IV, 439). Here, we may

readily agree that when thirst is operating in the soul, and yet is prevented by other mental activities from finding its outlet in action, then there must be some activity which does the hindering and, further, that this activity must be the stronger at this particular time. But we may well hesitate before sharing Glaucon's easy acquiescence in the view that "that which hinders in these cases, whenever it arises in the soul, is produced there by reasoning, while the impulses leading and dragging the soul are engendered by particular conditions and diseases" (IV, 439). The mere fact that something hinders does not tell us what it is that hinders, and certainly does not point to any peculiar rationality on the part of whatever does the hindering. It must be admitted, further, that people are often thirsty and determine to drink, and this although their determination is opposed by prudential motives in various forms. In other words, whatever the moralist takes to be the authoritative faculty, he is bound to admit that its operations are frequently disregarded. This is simply to say that its operations are hindered by whatever it opposes, that it is prevented from proceeding in its own moralistic fashion by the operations of the passions. This is the great objection to any theory of a "naturally authoritative" faculty, that no such faculty can be found, but that, admitting that in any particular mind it is possible to distinguish certain dominant forces, these forces have yet opposition to face and base their authority merely on power. Further, the nature of the dominant forces may differ in various minds—a character may be dominated by prudence, or by a spirit of investigation, or by any other of a host of motives—and it does not appear that such forces have any peculiar characteristic of rationality in common.

Secondly, the rationality of the hindering forces may be assumed to reside in their capacity for deliberation. This theory, that deliberation is the monopoly of a special rational faculty, is fairly generally maintained, but again a consideration of the suggested nature of the opposition between passion and reason indicates the incompatibility of this differentiation with the facts of mental conflict. The theory that deliberation

can never be the work of an affection is, as Hutcheson points out, fostered by the fact that passions often do not deliberate, but, as he continues by indicating: "This may indeed give some ground for distinguishing between passionate Actions and those from calm Desire or Affection which employs our Reason freely; but can never set rational Actions in opposition to those from Instinct, Desire or Affection" ("Illustrations", §IV). We can, in other words, distinguish between deliberative (or reasoning) and non-deliberative actions, but this does not imply that deliberation is the work of a special faculty existing for this purpose. While we commonly speak of "passionate" actions meaning those in which passion flows immediately into overt action, yet all our activities are the work of passionate motives, and there can be no such thing as non-passionate, in the sense of impartial, activity. Our passions sometimes deliberate, sometimes do not, the difference being determined by the strength of the passion and its mental context. If all deliberation were the work of an impartial faculty then fallacious reasoning ("prejudiced argument") would be an impossibility. It might be the case that where deliberation occurs prudential motives are usually present (this would be the empirical basis of Sidgwick's argument), but the deliberation may be the work of "passion" in opposing prejudice just as readily as the work of prudence in opposing "passion" (cf. "rationalisation") and in either case is passionate in the sense of being emotional.

While these considerations are commonly side-stepped by the moralist, they are really implied in all theories which speak of the reason as persuading the passions to pursue moral ends. If reason, for example, is considered as issuing mandates of the form "thou shalt not kill" to the passions, then for these to have any effect, passions must be capable not merely of pursuing their own particular object, but of considering alternative lines of action, i.e., deliberating. Similarly, if reason is regarded as persuading the passions to consider the general happiness, this can appear to the passions as an alternative only if they are capable of comparing their own

satisfaction with the general happiness, and this again implies deliberation. Consequently, not merely have we to reduce reason to the status of a passion, but we have also to recognise that there is no passion which has a monopoly over deliberation, that deliberating is simply one way in which a passion behaves.

From the preceding argument, the rejection of any theory that reason's objects are comprehensive while those of the passions are merely particular will necessarily follow. If the opposition is stated in metaphysical terms, and the object of reason is supposed to be a logical universal and the object of the passions a logical particular, then, of course, a rejection of this particular distinction would imply the demolition of the whole theory. The argument which would be employed by the empiricist on this point cannot be fully developed here; but it would take the form of contending that even to distinguish particulars from universals we are obliged to treat both as complex, as occurring in certain places and being qualified in certain ways. The main point for our special purposes, however, is that on such theory we should again be unable to connect the parts of the mind. If passion can only have particulars as its object, then it is quite incapable of considering the objects of reason, and reason is equally incapable of contemplating the objects of inclination. Further, if the objects of reason and of inclination are on different logical levels, it is impossible to avoid the conclusion that reason and inclination also belong to different logical spheres. Then if reason is, for example, noumenal, it cannot come into connection with passion, for this would imply that there was a logical medium common to both. If reason is eternal, there can be no time at which it opposes inclination, and, again, every opposition would imply a reaction which could only be expressed in terms of cause and effect. Alternatively, if reason affects inclination through the respect which the inclinations feel for it, this would mean that the operations of reason can be an object of concern to inclinations, and this again is possible only if reason and inclination exist on the one logical

level. Otherwise, respect is left floating in the air midway between two spheres of reality.

The opposition between the object of reason and the objects of inclination is sometimes stated in less obviously metaphysical terms, as when it is said that reason has as its concern the welfare of the whole self, while inclinations pursue their particular objects. Here, however, if reason actively opposes inclinations, then it is a mere pretence to say that its concern is for "the whole self" (unless reason is the whole self, in which case it is merely pursuing its own welfare), and if it endeavours to persuade inclinations, it can only do so if the welfare of the self can equally be the concern of inclinations. Thus, if inclinations can only pursue particular objects, then moral exhortation must be in vain; and if they can pursue complex objects, it is absurd to postulate a special faculty for this purpose. As this theory is developed by Hobhouse in "The Rational Good", reason becomes equivalent to the Socratic conception of justice in the *Republic,* being that which sets the mind in order and harmonises the various impulses. Now, Hobhouse is prepared to admit that such a factor must itself be impulsive, but if it is impossible for impulses to work together harmoniously unless we postulate a special harmonising impulse, then it is equally impossible for the impulses to work together harmoniously with such a special impulse unless we postulate a further harmonising impulse. We are faced with the old conclusion—reason is either ineffectual or unnecessary. Harmony does not arise in the soul, any more than in the state, from the imposition of an impulse towards harmony upon a primitive anarchy of impulses; but from the very first certain impulses find it possible to work together as having common objects (in fact, each impulse as complex is itself a working together of impulses), and others find it possible to harmonise after "education", i.e., contact with one another, with impulses in the mind of others and with non-mental activities. A special impulse towards harmony could otherwise have no object, because unless harmonious souls existed before such an impulse was operating, it could

have no notion of how to proceed in producing harmony out of anarchy, or, indeed, of what was meant by a harmonious soul.

The upshot of our argument, then, is that there is no peculiarly rational faculty within the soul, and that any theory which tries to postulate such a faculty falls into immediate difficulties as soon as it endeavours to describe the faculty or to connect it with mental operations generally. If this is so, then the question remains—what do we mean when we describe an activity as rational? The answer to this question is suggested by Mr. D. Taylor when he argues that "if I am asked why I behaved in a certain fashion, I can only satisfy the questioner of my rationality by showing a connection between my action and some end which I judge to be good" ("The Nature of Right", *A.J.P.P.,* Dec., 1936). For rationality is just a matter of satisfying others, i.e., it is a social relationship. But as opposed to Taylor's account of the matter, it may be said first, that there is no question of "goodness" in the ethical sense being a determinant of rationality, and secondly, that for the listener to regard my behaviour as rational, he will require to be satisfied regarding the end and not merely regarding my approval of the end. On the first point, the listener will be quite satisfied of my "rationality" if my action is directed towards an end which is neither morally good nor evil, so long as that end is socially recognised. For example, my present intention is to proceed to the Refectory to eat my dinner, and although I would be regarded as rational in undertaking this course of action, I certainly do not formulate the proposition "my eating dinner is good", for I agree with Hutcheson in believing that "few will say they approve as virtuous the eating of a bunch of Grapes, taking a Glass of Wine, or sitting down when one is tired" ("Illustrations", §III). Only if we use good in an economic sense, simply as meaning "socially demanded", is there any plausibility in saying that a judgment that X is a rational action means that "X is conducive to goodness". On the second point, if I judge that "suicide is good" and proceed

leisurely to make arrangements for that end, my listener will not be convinced of my rationality unless he approves of suicide. Thus, in Anderson's words, "what we currently mean by 'reasonable' is not transcending particularity, but conforming to certain specific standards, viz., to the objectives of the motives which speak as 'we' at a given time. And as reasonable means assisting, or at least not hindering, these objectives, unreasonable means obstructing or conflicting with them" ("Determinism and Ethics", *A.J.P.P.*, Dec., 1928). In other words, our judgments of rationality are finally nothing more than judgments of approval, i.e., of wishing something to take place.

Such a conclusion the moralist of obligation is bound to oppose; because his search for a "rational ethics" is finally a search for an ethics which will transcend all personal approvals and bind with a necessity beyond all question. This is evidenced in Sidgwick's "Methods of Ethics", where he argues that "what I judge 'right' or 'what ought to be' must, unless I am in error, be thought to be so by all rational beings who judge truly of the matter. In referring such judgments to the 'Reason', I mean to imply no more than just this 'objectivity'" (Bk. I, § III). But, as Sidgwick himself admits, we talk about objective truth in physics without imagining that such truths are formulated by a special faculty of reason. What Sidgwick really seeks, however, is not objectivity, but necessity. It is just in the search for such a necessity, for an eternal security, that the postulation of ultimate authorities arises, whether in the sphere of ethics or that of metaphysics; and it is only by the growth of a spirit of speculation, as opposed to the operation of prudential safety-motives, that rationalism will ever finally be defeated. Empiricist criticism may modify its formulation, but its spirit persists unchanged, and must while the culture which supports it retains its dominance.

INCENTIVES AND AN INTELLIGENCE TEST.[1]

By Henry H. Ferguson.

I. Problem and Scope of Investigation.

Relatively little acquaintance with students and others would appear to show that there exists a considerable discrepancy between ability and performance in everyday occupations, between the capacity to work and the will to work. Among the many questions which arise in connection with this situation is the following: To what extent is the actual performance in an intelligence test influenced by the degree of encouragement given to the examinee? More precisely, is it the case that appreciably different values are given to his capacity when he is given (and *accepts*) only normal and when he is given (and *accepts*) more than normal encouragement? The answer to this question is of some importance, as experimenters differ widely in their ability to arouse enthusiasm in their subjects or in some other way stimulate them to greater effort. The question is: Do the varying amounts of encouragement (presumably responded to by many subjects) materially influence the results?

The value of the intelligence quotient (I.Q.) would appear to be influenced, to a greater or lesser extent, by the following logically distinguishable factors: the nature and difficulty of

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[1] During 1935, Mr. K. W. R. Glasgow (now Lecturer in Education, Otago University) was investigating, on behalf of the New Zealand Council for Educational Research, the reliability of various school examinations. In the course of these investigations he had occasion to administer some 400 Otis Self-Administering Tests of Mental Ability (Higher Examination, Form A) to the subjects in this investigation.

These tests are the Test I referred to in the text. The author is indebted to Mr. Glasgow and to Dr. C. E. Beeby, Director of Educational Research, N.Z., for their permission to examine and make use of these tests. Thanks are also due to Mr. H. P. Kidson, Rector, Otago Boys' High School, Dunedin, for his permission to administer Test II, and to class masters for their helpful co-operation.

the test problems; the mental associations aroused by the test, or the setting in which it is administered; the subject's educational and cultural background; his physiological condition. Since that is the case, it has to be borne in mind that the results of the investigation described below do not necessarily apply to all intelligence tests under all conditions. What is asserted is asserted only for a certain class of examinees with a relatively uniform cultural and educational background, when submitted to a particular type of intelligence test under the conditions specified.

II. SUBJECTS.

The subjects were some 400 pupils in Forms III and IV. The figures given below, however, refer to only 156—two paired groups each of 78. Table I shows the distribution of their ages, when Test I was administered.

TABLE I.

Control Group.	Experimental Group.	
14 yrs. 6 months.	14 yrs. 7 mths.	Mean.
12 yrs. 7 mths.–16 yrs. 1 mth.	12 yrs. 7 mths.–16 yrs. 3 mths.	Range.
8·96 mths.	8·86 mths.	σ

No two paired subjects had chronological ages which differed by more than 6 months.

III. METHOD.

The method adopted was to submit the subjects to two intelligence tests of known relationship. For this purpose Otis' Self-Administering Tests of Mental Ability, Higher Examination, Forms A and B, were used. Two groups approximately equivalent as regards age (see above) and exactly equivalent as regards I.Q. were obtained. One of these groups acted as the Control. To avoid the possible influences of special rearrangements of the subjects, the class masters (previously well tutored in the nature of intelligence tests) submitted the subjects to the tests. Every subject was

left in his own class and submitted under his usual schoolroom conditions to both tests. Leaving the subjects in their own classes involved, however, a considerable wastage of intelligence tests, as it was impossible to pair off as regards age and intelligence (on the method adopted) more than approximately 39%. Such wastage, of course, is unimportant as compared with the possible vitiation of results by uncontrolled factors. Thirty minutes were allowed for each test.

The classes which were to form the material from which the Control and Experimental groups were to be taken were determined after considering the I.Q.s obtained by various classes in Test I.

On the morning when Test II was administered, the classes from which the Experimental group was to be obtained were asked to remain behind in the school Assembly Hall. They were then addressed by the author as follows:

This morning you are each to have a very interesting beginning to your school day. We have a scheme to put before you in which you will all be interested. We are sure of your co-operation even before I tell you what the scheme is.

Each of you has already done an intelligence test. Now we want you to do another test just like the last one. Our purpose is to see how much better you can do this time. We want each of you to do the very best you can. By way of special encouragement we are offering 6 prizes of orders to the value of 5s. each. The winners may buy whatever they fancy. The prizes will make very nice Christmas presents. And the peculiar thing about these prizes is that you all have an equal chance of winning one. They are to be given to those who exceed their previous score by the greatest amount, no matter what that previous score was. For example, if you scored 100 points before and now score 120 points, you would beat the boy who scored 120 before and only 130 now. It is the additional points that are to count for the prizes. You each have an equal opportunity of winning one, and we want each and all of you to do your very best.

When you get to your room your master will give you the test.

After the above had been delivered with as fine oratory as the author could command, the classes departed to their several classrooms, where they were submitted to Test II.

At this point it may be said that the values of the proposed prizes were discussed with the Rector and various masters.

They were of the opinion that the actual prizes offered were sufficiently substantial to ensure an effort on the part of the pupils to obtain them.

At this point it may be noted, also, that 121 days elapsed between the giving of Tests I and II. Such an interval was not intentional, but, unfortunately, could not be avoided owing to difficulty in obtaining copies of Test II. This point will be referred to later.

IV. WHAT WE MIGHT REASONABLY EXPECT.

Prima facie, it would appear that we might reasonably expect to find certain changes in (i) the I.Q.s, (ii) the number of test problems attempted, (iii) the percentage of wrong answers to right answers after the introduction of the monetary incentive and the oratorical[1] encouragement.

V. I.Q.s BEFORE AND AFTER INTRODUCTION OF SPECIAL INCENTIVE CONDITIONS.

As has been mentioned, the control and experimental groups were paired in such a way that each I.Q. in the one group was balanced by an I.Q. of exactly the same value in the other group. Table II gives the I.Q.s before and after the introduction of the special incentive conditions.

TABLE II.

	Test I.	Test II.	
Control Group	111·0	107·4	Mean.
	96–129	88–125	Range.
	7·78	8·99	σ
Experimental Group ..	111·0	107·7	Mean.
	96–129	85–122	Range.
	7·78	8·80	σ

P.E.D for means Test II = ±0·096.

[1] The term "verbal" is not used, as encouragement was attempted, not only by means of the words spoken and the tone, etc., with which they were uttered, but also by means of appropriate facial changes, etc.

It will be noted that the Mean I.Q. for both control and experimental groups is lower for Test II. This may probably be explained in part by the method of arriving at these I.Q.s. Otis in his Manual of Directions, p. 3, has the following:

PRACTICE EFFECT.

Whenever a second form of a test is given after a first form, especially when the two forms have been made very much alike, students tend to do better on the second test. The effect of the first test is generally termed "practice effect", but it may include a number of effects. Among these is general familiarity with the method, resulting in ability to get under way more quickly, lessened nervousness, memory of mode of attack of certain types of problems, etc.

A study was made of the effect of practice when a second form of the Intermediate or Higher Examination was given the next day after the first form. The average gain in the second score was 4 points in each case. Therefore in such a case 4 points would have to be subtracted from the score in the second test to make allowance for the effect of practice.

Now, as has already been noted, not only one day, but 121 days elapsed between the giving of Tests I and II. It may therefore be that a portion of the "practice effect" (actually allowed for by subtracting 4 points from the score in Test II) did not in fact exist. Had the I.Q.s for Test II been determined in the usual way, their mean value and range would have been found to approximate much more closely to those for Test I.

It is possible, too, that approaching summer holidays[1] had something to do with the drop in the I.Q.s in Test II.

Be these conditions as they may, we are faced with the unexpected result[2] that the introduction of special incentive conditions had no statistically significant influence on the I.Q.s *when taken as a whole.*

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[1] Test II was administered on December 12.

[2] In 1932 the author carried out a similar investigation on a smaller scale (40 subjects). The results then obtained are in substantial agreement with those now described, but the result was so contrary to expectation that he concluded that (i) either the intended incentives were not in fact incentives, or (ii) that some other factor had upset the results. (See Section XII.)

VI. NUMBER OF TEST PROBLEMS ATTEMPTED BEFORE AND AFTER THE INTRODUCTION OF SPECIAL INCENTIVE CONDITIONS.

While it is logically conceivable that I.Q.s could remain the same after the introduction of special incentive conditions, one would expect to find some difference in the number of problems attempted. Table III shows the number of test problems attempted before and after the introduction of the special incentive conditions.

TABLE III.

	Test I.	Test II.	
	59·7	65·9	Mean.
Control Group	42–75	43–75	Range.
	7·23	7·30	σ
	61·1	67·7	Mean.
Experimental Group ..	36–75	35–75	Range.
	8·21	7·43	σ

P.E.D for means Tests I and II (Control) = ±0·78.
P.E.D for means Tests I and II (Experimental) = ±0·85.
P.E.D for Control and Experimental Groups (Test I) = ±0·82.
P.E.D for Control and Experimental Groups (Test II) = ±0·79.

Regarding these figures it may be noted that while the control and experimental groups were paired exactly as regards I.Q. on the basis of Test I, they were not paired exactly for number of problems attempted. The actual difference between the two groups in this respect is, however, not statistically significant, the P.E.D being more than twice the size of the difference between the means.

It will be noted that the actual number of test problems attempted by both groups increased in a statistically significant way in Test II, the difference between the means being approximately eight times the size of the P.E.D in both the control and experimental groups. The statistically significant difference in this respect can only be explained in part by the 121 days elapsing between Tests I and II.

The most interesting fact regarding Table III from the standpoint of the present investigation is, however, that there

is no statistically significant difference between the means in Test II, the P.E.$_D$ being approximately 2·3 times the size of the difference.

Here again we are faced with the same unexpected result. When the number of problems attempted is considered as a whole, the special incentive conditions appear to have no, or little, influence.

VII. NUMBER OF TEST PROBLEMS ATTEMPTED BUT ANSWERED WRONGLY BEFORE AND AFTER INTRODUCTION OF SPECIAL INCENTIVE CONDITIONS.

So far we have been unable to find any statistically significant influence of the special incentives. It yet remains possible, in considering the results as a whole, that we may find some significant influence on the number of errors made by the examinees. Table IV sets out the relevant facts regarding this point.

TABLE IV.

	Test I.	Test II.	
	15·8	20·5	Mean.
Control Group	1–33	6–44	Range.
	6·93	8·84	σ
	16·9	22·0	Mean.
Experimental Group ..	2–40	4–44	Range.
	6·90	7·49	σ

P.E.$_D$ for means Tests I and II (Control) = ±0·86.
P.E.$_D$ for means Tests I and II (Experimental) = ±0·77.
P.E.$_D$ for Control and Experimental Groups (Test I) = ±0·75.
P.E.$_D$ for Control and Experimental Groups (Test II) = ±0·88.

Here again we find statistically significant difference between the means in Tests I and II, but no such significant differences between the means of the control and experimental groups for either Tests I or II.

VIII. SUBJECTIVE DATA.

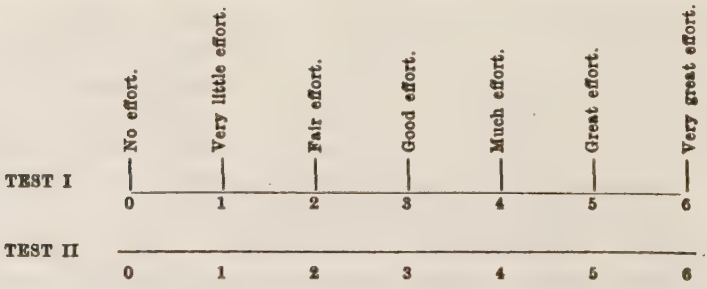
So for we have been considering only objective data. When we take certain subjective data into consideration—

the estimates by the subjects of the relative amounts of effort they expended in Tests I and II—it becomes possible to consider the quantitative data in more detail. We could consider the relations of the relative amounts of effort alleged to I.Q., number of problems attempted and number of errors committed. Owing to the time and manner in which such subjective data were obtained, only the relation to the I.Q.s obtained of the relative amounts of effort alleged will be considered.

IX. EFFORT ALLEGED IN TESTS I AND II AND ITS RELATION TO I.Q.S OBTAINED.

As has been pointed out recently in this Journal by Passmore,[1] the psychologist cannot assume that the conditions which he sets will be those adopted by his subjects. With that fact in mind an attempt was made to obtain "introspective" results (unfortunately too retrospective to carry much weight). The method adopted was to ask the subjects, the morning after they had been submitted to Test II, to fill in the sheet illustrated below:

I HAVE INDICATED WITH GREAT CARE AND ACCURACY ON THE SCALES GIVEN BELOW THE AMOUNT OF EFFORT I PUT INTO THE TWO INTELLIGENCE TESTS



I HAVE DRAWN LINES INDICATING THE AMOUNT OF EFFORT I EXPENDED.

NAME_____

FORM_____

(The actual length of the lines on which the amount of effort had to be indicated was six inches.)

[1] J. A. Passmore, "The Nature of Intelligence", *A.J.P.P.*, December, 1935 (p. 282).

Typed instructions relating to these sheets were issued to class masters. These were as follows:

Say to the boys:

"Read these sheets carefully." (Allow ample time for this.)

Then say:

"If you consider that in Test I you put 'good effort' into the test, neither more nor less, put a vertical line on the paper just at the number 3. If you consider that you put rather more than 'good effort' and less than 'much effort' indicate by placing the vertical line appropriately between 'good effort' and 'much effort'."

Illustrate further until you are reasonably certain that all the boys understand what is wanted, but be careful to avoid suggesting in any way that there are correct answers, or that there are certain answers which you would like. The attitude of scientific accuracy is what you should aim at.

The form of these introspection sheets would perhaps appear to have been more elaborate than was warranted under the circumstances. An elaborate rather than a simpler form was decided upon to ensure as far as possible accuracy of statement as regards whether effort was thought to be more, the same, or less in Test II as compared with Test I.

Table V shows a relationship between effort alleged and I.Q.s obtained.

TABLE V.[1]

	Effort Alleged in Test II.	Subjects.	Higher I.Q. Test II.	Same I.Q. Test II.	Lower I.Q. Test II.
Control Group ..	More.	37	7	1	29
	Same.	11	4	1	6
	Less.	26	1	4	21
Experimental Group	More.	48	13	1	34
	Same.	15	4	2	9
	Less.	7	1	1	5

[1] Absentees account for discrepancy in number of subjects (originally 156).

Regarding these figures, we should recall the method by which the I.Q.s were determined for Test II and the comments already made (Section V).

While it would be unjustifiable to place too much importance on the subjective data, it would be equally unjusti-

fiable to dismiss them as of no value. For, while certain subjects may even wittingly have made a false statement, and while certain others may unwittingly have estimated their relative amounts of effort wrongly, and while others may simply have guessed at their relative amounts of effort, it would be reasonable to believe that the data obtained from the Introspection Sheets are rather more true than false. If anything, the subjective data of the control group are probably the more correct. With all these considerations in mind, it is interesting to note how amount of effort alleged is related to increases and decreases in I.Q. It is to be noted that increases in effort alleged (no matter from what cause or causes the increases, if actual, may have been due) are correlated positively with increases in I.Q. and that decreases in effort alleged (no matter from what cause or causes actual decreases may have been due) are correlated positively with decreases in I.Q.

Obtained as and when they were, the subjective data do not merit a full statistical treatment. They are of interest, nevertheless, in so far as they illustrate the danger of treating results *en masse*.[1] Treated as a whole the results indicated no statistically significant effect of the special incentive conditions, but considered in the light of the introspective data, it would appear that the special incentive conditions, if and when adopted, had an influence on the I.Q. obtained.

It is not implied in what has been said that the incentive conditions when adopted necessarily increased the I.Q. (effort alleged is by no means correlated perfectly with increases in I.Q.). It is conceivable that the reverse may have been the case, overmuch effort to do well being detrimental. What is more, even when the general drop in the I.Q. values in Test II is taken into account, our figures would support such a view. (Consider Distribution Table showing increases and decreases.) In this connection reference could be made to, e.g., Spearman[2] and Mace.[3]

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[1] See Passmore (*op. cit.*, p. 285) on Coherence theory.

[2] C. Spearman: *Abilities of Man*, 1926 (p. 334).

[3] C. A. Mace: *Incentives, Some Experimental Studies*, I.M.R.B. Report, No. 72, 1935.

It becomes apparent that this whole problem of the relation between incentive and I.Q. requires the careful investigation of individual cases, when adequate notes may be made on each subject.

X. OTHER FACTORS OF INTEREST.

(i) *Percentage of Wrong Answers to Total Number of Problems Attempted.*

The author has frequently thought, as probably many others have also, that certain apparently valuable data are, or tend to be, ignored, when intelligence tests such as those used in this investigation are used. It will have been noted by many people using such tests that subjects of the same chronological age may each obtain the same I.Q. in distinctly different ways. Certain subjects attempt relatively few test problems, but have a high percentage correct, while others attempt perhaps all the test problems but answer a relatively small percentage correctly.

Table VI shows the distribution of the percentage of wrong answers to the number of test-problems attempted by the control and experimental groups in Tests I and II.

TABLE VI.

	Test I.	Test II.	
Control Group	26·2 1·8–50·0 10·44	30·4 9·8–59·5 11·78	Mean. Range.
Experimental Group ..	27·2 5·6–54·1 9·66	32·4 11·4–59·4 10·61	Mean. Range.

The data on which the figures in Table VI are based have been considered already in dealing with the Tables III and IV.

The point of interest in the present connection is the divergence in quality between the various performances. In a number of cases it is probable that subjects verified each answer before proceeding to the next test problem.

A recent publication by Mace is of interest in this connection. Discussing the relations between speed and accuracy in computation tests, he records how some subjects noted that they "experienced an almost pathological compulsive tendency to verification in spite of the knowledge that it was more profitable to perform a further computation than to verify one which was complete. This tendency might co-exist with considerable ability, so that nearly all the time devoted to verification was in fact wasted—except for the fact that the subject found he could not concentrate on later computations whilst any doubt remained concerning one he had completed."[1]

Mace does not place overmuch emphasis on such subjective data, and would appear to be well aware of the defence mechanisms noted by Sutherland[2] in an article on the problem of the speed factor in intelligent reactions.

The point which it is desired to make, however, is that the quality of the performances is something which it would appear desirable to consider from the point of theory as well as of practice. The possible practical significance of such differences in quality are most apparent in connection with the problems of school classification and vocational guidance.

That the same subjects tend to produce about the same quality on separate occasions is shown by the following:

Correlations between Tests I and II for percentage of wrong to attempted answers.

Control group	$r = 0{\cdot}71 \pm 0{\cdot}038$
Experimental group	$r = 0{\cdot}68 \pm 0{\cdot}041$

It would appear to be a worth-while investigation to determine, e.g., the actual correlations between the I.Q., quality of performance in intelligence tests and school attainment.

(ii) *Discrepancy Between I.Q.s in Tests I and II.*

The distribution table given below shows the amount of discrepancy between the two I.Q.s for the 156 subjects. The

[1] *Op. cit.*, p. 15.

[2] J. D. Sutherland: "The Speed Factor in Intelligence Reactions", *British Journal of Psychology*, 1934.

amount of discrepancy is the number of points increase or decrease in Test II as compared with Test I.

1	0	0	0	1	0	2	4	4	11	12	6	9	14	18	12	7	10	11	9	6	6	4	4	2	0	1	2	Subjects.
18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	1	2	3	4	5	6	7	8	9	Units increase or decrease.
									−														+					

Possible reasons for the greater tendency to a decrease rather than to an increase in Test II have already been noted.

Whatever else the figures tend to show, they indicate the desirability of using at least, two intelligence tests before coming to a conclusion (still, of course, somewhat tentative) regarding a person's I.Q. It would be desirable, therefore, when I.Q.s are used for the purpose of school classifications, to have pupils tested on, at least, two different occasions. In so far, too, as any attempt is to be made at even an embryonic type of vocational guidance, it is desirable that, at least, two intelligence tests should have been administered.

It is to be noted that the large discrepancies noted above co-exist with the following high correlations:

Control Group .. .. Test I and Test II .. $r = 0{\cdot}87 \pm 0{\cdot}019$
Experimental Group .. Test I and Test II .. $r = 0{\cdot}899 \pm 0{\cdot}015$

It might appear that the taking of full notes regarding the health, etc., of each subject at the time of the examination would get over the difficulty referred to in this section. But would not the experimenter then be faced with the problem of the defence mechanisms of the subject?

XI. SCHOOL "ATMOSPHERE" AND ORDINARY TEST INSTRUCTIONS.

While the data from the control and experimental groups showed no statistically significant differences, when considered as a whole, when the subjective data were taken into consideration, it appeared that the relative amounts of effort (due to whatever cause) did have some effect.

That no statistically significant effect of the special incentive conditions was observable, when the groups were considered as a whole, may have been due to, among others, the following factors: (i) the general school "atmosphere"

ensuring reasonable application to any given task, (ii) the special conditions laid down by Otis for performing the intelligence tests: ". . . do the best you can. . . . Try to get as many right as possible." It may be that, on the whole, these other incentive conditions were such as to obscure any effect of the special incentive conditions.

XII. SPEARMAN.

While the data described do not merit a discussion of their bearing on the ramifications of Spearman's view, it would be ungrateful of the author to finish this article without some reference to Spearman, a lack of acquaintance with whose writings, combined with certain expectations as to what should happen, led the author to doubt the validity of results obtained in a smaller, but similar investigation in 1932 (see footnote to Section V). Had it not been for Spearman, it is doubtful whether the author would yet have dared to announce such unexpected results.

The main problem of the present investigation could have been well stated in Spearman's words: "How much does the success of anybody at a test of cognition really depend, not upon his cognitive ability in itself, but rather upon his conation to cognise?"[1]

About 1915 Spearman[2] attempted to determine the effect of variation of incentives on tests of g. In half the experiments the subjects were told to work as hard as they possibly could; in the other half they were directed *not* to work particularly hard. That research established the "rather unexpected result", viz., that the inter-correlations between the results of the various tests, whether done with great or with little effort, "turned out to be in every case just about the same".

In this connection Spearman refers to work done by Courtis, Wild, Aveling and Stevanovíc, and concludes: "The results of these experimental variations suggest then, that—with the notable exception of the cases where only speed, not quality, has to be taken into account—a person's success at any cognitive operation is unexpectedly far from being

[1] *Op. cit.*, p. 331.
[2] See *op. cit.*, p. 333.

completely dependent upon the degree of effort which he puts forth."[1] "On the whole, the view that the general cognitive superiority of one individual over another derives mainly from greater intensity of effort would not appear to be supported by any of the available evidence. A certain amount of effort is, indeed, normally required; but by no means more, it would seem, than can readily be elicited in all normal testing."[2]

Such as they are, the data of the present investigation are not, at least, in opposition to Spearman's view.

XIII. SUMMARY AND CONCLUSIONS.

In this investigation two groups of schoolboys, 156 in all, paired as regards age and I.Q., were submitted to two intelligence tests. An attempt was made to determine the effect, if any, on the I.Q. of varying the incentive conditions.

When only the objective data were considered, the variation in the incentive conditions showed no statistically significant effect; when subjective data (the relative efforts alleged) were considered, it appeared that the amount of effort expended had some effect on the value of the I.Q., but not necessarily in a positive direction.

The present investigation indicates:

(i) That, contrary to what might be expected, varying amounts of encouragement given by different experimenters and by the same experimenter on different occasions, will not in the large majority of cases influence I.Q. results significantly.[3]

(ii) The desirability of using, at least, two intelligence tests in assessing the I.Q. This point should be noted when intelligence tests are used for purposes of school classification. It is obviously important also in connection with even an embryonic vocational guidance system.

(iii) The desirability of considering the quality of the performances in intelligence tests as well as the values of the I.Q.s.

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[1] *Op cit.*, p. 334.

[2] *Op. cit.*, p. 335.

[3] Spearman says, *op. cit.*, p. 191: "All normal children, and the great majority even of adults, can easily be induced to try at the tests quite as hard as is likely to improve their performances."

DISCUSSION.

CAUSATION AND DETERMINISM.

By D. Taylor.

Professor John Anderson's contribution to the discussion on freedom and determinism calls for an examination of what we mean by these terms. I do not propose here to attempt a proof of the will's freedom. What I should like to do is to discover whether there is, as he contends, a contradiction in holding that the world is wholly determined, as I do, and that man is free in certain of his actions as I also do. This enquiry is of fundamental importance because the protagonists are of such stout proportions. On the one hand the denial of determinism, when clearly understood, is the assertion that the world is of a sort radically unintelligible, that is to say, of no sort at all. On the other hand, to deny freedom is, I believe, to deny values, truth as well as goodness and beauty, to make nonsense of all philosophy and all enquiry, to deny that there are intelligences for whom the world may or may not be intelligible.

Let us begin by removing some misconceptions. If the freedom of which Professor Anderson is critical is a capacity to do one thing today and another tomorrow without rhyme or reason; if it asserts that what has happened might, without anything else having been different, have quite well been otherwise, and as a corollary to that, asserts the unpredictability of human action, I am not concerned to defend it. I will not accuse the mechanist of setting up straw men for the express purpose of knocking them over, because unfortunately the straw men already exist in numbers. Straw is nevertheless straw, and I should prefer to see antagonists more evenly matched. Paradoxically it is not to the philosopher but to

the scientist that we owe both mechanism and indeterminism. Seventy years ago scientists were ready to explain the whole range of existence in terms of atoms. Having had some severe setbacks they are today uncertain that they can explain anything.

Nor do I mean by freedom independence of environment in the sense in which all things have some such independence, in that they are modified only as their natures permit of such modification. On this view that thing is most free which is least dependent on other things. Complete freedom is complete independence, complete isolation, one may as well say complete annihilation. The freedom I wish to defend is not the complete absence of relations with things. It is a character or quality which those relations possess. A man is free in my view when he judges that something is good, judges further that certain actions will bring about that good, and because of this acts in that fashion. He is just as much determined in this as a stone is determined in its flight, but he is rationally determined not causally. Mechanical determination is constitutive: the causes literally make up the effect as the parts of a machine make up the machine, but the purposes of man, his judgments and his ends do not constitute his actions. They are not its causes but its reasons. Is freedom in this sense incompatible with determinism? To make an answer we must ask what we mean by determinism. I propose to do this by examining the arguments of those who deny determinism—the Eddingtons and Jeans whose guides to the universe are so deservedly popular.

As a starting point let us say that a cause is what produces a change in a thing, a change shaped by the character of the cause and of the thing affected. If this is a true description of the causal relation, that relation must be a necessary one since this is what is meant by the phrase "shaped by the character of the cause and the thing affected". This definition has, however, been criticised on the score that the phrase "shaped by the character of the cause and the thing affected" is a mere cloak for ignorance, that in fact we have

not the least notion how a cause produces its effect or even that the effect is produced at all. It has been urged by empiricists from Berkeley onwards that we have no direct experience of a productive causal relation. We perceive only temporal sequences and spatial juxtaposition. Having no direct knowledge of causation which means more than this sequence and juxtaposition, we cannot possibly know it by any other means. It is impossible to infer from experience to what lies completely outside experience. When a ball strikes and deflects another we do not see the first move the second. We see only that when the first touches the second it does move. We see only a sequence. And this is typical of our experience of the causal relationship. We do not perceive any transitive relation between what we call cause and effect. We perceive only that given the one the other occurs. Language is mystical and pretentious if it suggests that we know more than this sequence. The assumption of a productive relationship between antecedent and sequent is useless to explain that sequence on two counts. It is useless because we have no clear understanding of what a productive relation is, since that relation is never the object of any clear experience. It is useless also because as supposedly qualitative in character it is by nature unintelligible. The mind can deal with the quantitative differences of things because these present us with a common basis in mathematics, but not in the qualitative differences which are ultimate, except in so far as they can be reduced to quantities.

It is admitted by these philosophers that with the denial of some such relation as that of production, the link between cause and effect loses its necessity. Unless we can see how the transition from cause to effect is brought about, we cannot possibly hold that it is necessary—that given the same circumstances, we must have the same result. If causal connection is merely sequence, this means that the *how* of a transition can never be experienced and so reduces necessity to statistics. Such an outcome does not, however, disquiet its authors. They believe that philosophy has been too much influenced by the example of mathematics and too little by the practical sciences.

The tendency of the sciences to become more and more closely linked with mathematics should cause uncertainty to prick, but either they are immune from the disease of doubt, or the example of certain branches of physics in successfully using reasoning based on probabilities is sufficient encouragement. Apart from mathematics certainty is merely a limiting concept for degrees of probability.

This is the case for indeterminism. Its strength lies in its refusal to accept mere words in place of explanation, its weakness in its too hasty conclusion that explanation is always impossible. It claims to replace a pretentious but invalid deductive method by a more modest argument from probability. I have argued on another occasion in this Journal that no reasoning from probability is of the slightest use without deductive analogical reasoning, and this because without analogy it is impossible to escape from the closed system upon which probability is primarily based. Indeterminism destroys not only deductive argument but argument from probability also. From the point of view of an intelligence its world is completely vicious. Things cease to be and come into existence without rule or reason. Temporal sequences do not make order even if they are as unwavering as the sun. Their existence is, if we deny causal order, a complete miracle. Nor is it possible that this merely temporal order is imposed upon a chaotic world by deity, since it is impossible to impose order on that which is not already ordered. Absolute chaos presents to a mind nothing which it is capable of grasping.

It is unnecessary to deal specifically with the claim that the qualitative character of things is unintelligible except where it can be expressed in terms of quantity, since this contention is, as we shall see, merely a reiteration of the more general claim. It may be pointed out, however, that quantities are always in terms of units, and that the character of these units must enter into any attempt to relate them mathematically with other units.

The chief claim of indeterminism to credence hangs on its denial that we ever do, in fact, perceive any causal relation-

ship between events. If this is true, we must accept its conclusions, difficult as they are. It is worth noting that their difficulties are as great for morality as they are for knowledge. Morality, just as much as science, depends on order, though possibly a different sort of order. It is extraordinary that anyone should have imagined that a faculty for random activity among radio-active particles should in any way make more intelligible the mental and moral qualities of men. That the most casual observer of those human actions which are guided by the conception of the good, the just or the beautiful should see in them an exhibition of random activity, I find hard to believe. The behaviourist account is eminently more probable. Confusing determinism with mechanism, the indeterminist also fails to see that his own account of mind is at least as materialist, though not mechanist, as is Behaviourism. It is, of course, a common experience of those who set out to spiritualise the universe to end up by materialising mind.

Approached from the causal end, however, the indeterminist has a plausible case. In the example of the colliding balls, all that we actually see (unless we are physicists) is an impact and subsequent change of direction. The ascription to the one ball of a force which deflects the other can be no more than the expression of our conviction that the change in the one is brought about by the change in the other. It in no way explains how that change is brought about. We can, it is true, correlate different angles and speed of impact with angles and speed of deflection. But this correlation is no more than classified description. Making no attempt to show how the one ball affects the other, it gives no ground for assuming a necessary connection between the two. Moreover, our habit of generalising without such insight gives the indeterminist some psychological ground for supporting a behaviourist account of mind, and so some show of reason for his claim to dispense with reason.

The mere example of a situation which we habitually assume to be causal but in which we can see no causal connection is in itself no argument. We may be wrong in assuming it to be a causal situation, or, again, it may be that

the causal connection demands closer scrutiny. It cannot be urged that what can be perceived must be immediately obvious. The sting of the argument lies in the assertion that this is the type of all our experience of causal relationship, that we never do, in fact, perceive more than temporal and spatial proximity, even that (abandoning empiricism) we never can perceive more. When pressed, the argument from fact falls back on the logical argument.

Let us define a mechanical quality as one the complete account of which involves spatial relations. Then, wherever we have entities possessing such mechanical qualities (e.g., weight and solidity) existing in spatial relation, these entities may be said to constitute a whole, in the sense that the parts in relation literally make up the whole. In an intelligible sense, the whole is produced by the parts in that relation, so that we may say that the nature of the whole follows necessarily from the nature and relations of the parts. A bridge is such a whole of parts. Given certain parts exhibiting certain qualities, the whole must have certain qualities. If the teeth of two pinions possessing those qualities which we synoptically describe as solidity and weight are interlocked, the rotation of the one necessarily involves the rotation of the other. Electrical circuits offer examples of similar relationships, causal connections which can be directly experienced.

At this point the factual argument of the indeterminist is abandoned for the logical one. He denies the force of the foregoing examples on the ground that causation which depends on an assumption is hypothetical, but explanation in terms of givens themselves unexplained is no explanation at all, and this contention is backed up by the assertion that, in the nature of the case, explanation must always be in terms of unexplained givens. Thus he at once demands that explanation should be in terms of simples, and denies that such explanation is explanation. He refuses to regard A and B as the conditions of X so long as A and B are themselves conditioned. Fully to determine X we must trace its conditions back to the unconditioned, and when we have found it, it will

be both unthinkable and useless. This contradiction, the indeterminist contends, arises from the nature of things (a strange phrase in his mouth), and suggests that reason is not the instrument of pure knowledge philosophers are wont to think it, but a practical tool for our comfort.

The similarity between this antinomy and the Kantian antinomies is obvious. The arguments of the second antinomy run thus. If the world is not made up of simples, it is made up of nothings. But no simple is so simple that it is not divisible at least spatially. Consequently there are no simples. The argument is not, of course, a true antithesis, because simplicity and complexity are taken to be absolute. The passage from the complex to the relatively simple requires analysis, but analysis may be of different sorts. For example, a cheese may be spatially divided or chemically divided. While complexity and simplicity are regarded as absolute, there is no means of deciding whether a spatial analysis or a chemical analysis is the better account of a complex. The choice of spatial analysis suggests that all analysis is infinitely regressive. In fact, that is not the case. No other sort of analysis is infinitely regressive. Moreover the one form that is—spatial analysis—presents us with no difficulty. No one imagines that the reality of a two-inch line is impaired by its being infinitely divisible. The mind is not left reeling from lack of support. Spatial infinite divisibility is, on the contrary, perfectly intelligible. Yet it is perfectly true that the whole line is dependent on the parts of the line in the sense that, if they did not exist, it would not exist. And since each part can be divided infinitely, we have an infinite regression of dependence which at least sounds vicious. The thesis is formally invalid. It assumes as part of the proof that the world is made up of simples, that "composition as applied to substances is only an accidental relation, in independence of which they must still persist as self-subsistent beings". And this is no less than saying that only the simple is really real. Is it true that a whole is dependent on its parts in a way which makes its being secondary to the being of its parts? The belief that this is true depends on the false assumption that the being of

a complex thing is just the total being of its parts. The falsity of this assumption would be apparent if, instead of using such a word as "total" or "sum", which, in fact, refers to some specific sort of relationship and so to a reality which is not just the parts, the word "inventory" were used. (Even here, of course, some sort of relation is suggested. It is impossible to avoid all relation and still to speak of things as a group.) I am not contending for the existence of emergent qualities. I am merely arguing that the relation into which the parts of a thing enter helps to determine the thing, and that consequently we cannot reduce the being of a thing to its parts. That being the case, it is not true to say that the whole is dependent on its parts in any way in which the parts are not also dependent on the whole. This was evident in the case of the line, and should be evident in all cases. The attempt by physicists and some philosophers who relate the fact of colour to the fact of heat, in terms of molecular structure, to deny the reality of the facts from which they start is nothing short of ludicrous.

"If the conditioned is given", says Kant, "the entire series of all its conditions is likewise given; objects of the senses are given as conditioned; therefore, etc." The argument has power to perplex us only if we interpret the word "conditioned" as meaning 'dependent for its being' instead of simply 'related to' or 'dependent for its being this or that'. If we consider, we must see that it is the conditioned that is real and the unconditioned which is unreal. If two things are necessarily connected, you may say, if you like, that if the one did not exist the other would not. But to argue that a thing, which does in fact exist, does not really exist because, if something else which does in fact exist did not exist, it also would not exist, is palpably absurd. The simple depends on the complex as much as the complex depends on the simple. No relation can be a one-way relation and still relate. Blot out of existence anything that exists, let the world be as though it were not, and you must blot out everything to which it is related, however remotely. In removing the whole you remove the parts as surely as you destroy the whole in

destroying the parts. The state of contingent existence is not parallel to the state of dependence of the Indian's world upon the elephant and the tortoise. Each contingent existent is as real as it is possible for anything to be. It is. The word 'contingent' is, in fact, not correctly used to qualify existence. Both 'contingent' and 'necessary' are adjectives which can qualify the relation between things, but not the things themselves.

Explanation, then, is not an attempt to show why things are, but to show why they are what they are, to relate things with each other necessarily. There is, thus, no real need for a regression such as Kant contemplates, even as an ideal. If two things are necessarily connected they are connected no matter what further relations they may possess. In describing explanation as hypothetical, the indeterminist forgets that the hypothetical proposition presupposes a universal categorical. But, if the error of the indeterminist lies in attempting to reduce all relations to facts, there is a corresponding error by which determinists are apt to reduce all facts to relations. The inviolability of law, on which the determinist bases his denial of freedom, is the expression of just this unquestionableness of fact, as the content of law is the expression of its character. Consequently that inviolability is purely formal and cannot possibly be made the basis of any argument about the character of fact. To do so is to assert that there are laws, but no things which the laws describe.

Freedom which is a capacity for unrelated spontaneity is ruled out for the same reasons as determinism is ruled in. But if by freedom we mean a quality in things, a character in the facts related, if, for example, we mean the rational behaviour of men, such freedom can only be asserted or denied after thorough examination of the facts. If it can be shown that there is an innate contradiction in the notion of a rational will, in that it involves the possessor in the absurdity of not being what he is, freedom is destroyed in the *a priori* fashion which Professor Anderson prefers. In fact, there is no such contradiction. If a pin sticks into a man he cries out, and

we say that this is because his nervous system links up the two events, but if the pin-sticking occurs when it is important for him to remain silent, he may not cry, and, on the surface, at any rate, this is because he possesses ends, and the intelligence to fit circumstances to those ends. There is nothing in this second account which suggests indeterminism. We have merely a more complicated element than usual, giving a special character (which we call freedom) to the total situation.

It is true, of course, that other explanations of acts which we usually describe as purposive have been given, explanations which omit all reference to purpose. It is possible, even, that they are correct. My present point is that neither the one explanation nor the other is indeterministic, that there is no such thing as an indeterministic explanation, and, further, that there is only one way of deciding between these explanations, and that by examining the facts to be explained.

It will, of course, be argued by the critics of free will that I have avoided the logical difficulties of free will by forswearing it in public only to bring it in again in fancy costume as rational judgment, in the hope that, so disguised, it will not be recognised. It is just this criticism which makes it so evident that they are determined to decide the whole question out of hand, without any enquiry into the facts. This is the issue between mechanist and rationalist. Is the behaviour of man in making a rational judgment analogous to the behaviour of a pebble in tumbling in the wash, or does it involve something which we can intelligibly describe as freedom? I do not pretend that a strong case may not be made for the former view, but I do object to the attempt to prejudge the issue. Either solution is compatible with a determinism as complete as determinism must be. For determinism contends only that if you have a similar system of parts in similar circumstances, you must have similar results. Its compulsion is mechanical if the things related are mechanical, rational if they are rational. We may suppose the existence of devils possessing unheard-of characteristics. Determinism demands only that they shall be consistent devils.

It should be obvious that the *a priori* opponent of free will is identifying determinism with mechanism, probably because he believes that determinism incompatible with anything but mechanism. Yet the logical outcome of his position is not mechanism, but indeterminism. Deny the reality of your complex and you must ultimately deny all reality. In any case, his reasons for the identification of determinism and mechanism should be openly maintained or his thought is likely to become as mechanical as his theory requires it to be.

REVIEWS.

THE TWO SOURCES OF MORALITY AND RELIGION. By Henri Bergson. Translated by R. Ashley Audra and Cloudesley Brereton, with the assistance of W. Horsfall Carter. Macmillan, 1935. Price: 10s. net.

For some years prior to the original publication of this work in 1932 it was known that M. Bergson was preparing to crown his great philosophical career by carrying the main themes of his earlier works into the study of morals and religion. Indeed, the reviewer remembers how eagerly his few *obiter dicta* on these subjects were being canvassed in the French universities in 1926. It often happens that such high expectations are disappointed; but M. Bergson, who allows his meditations to ripen slowly, and never publishes till both thought and style are refined and mature, has risen to the height of an exacting occasion. His argument is incisive and scintillating, as it always was; and to these undimmed sparkling qualities of youth he adds the insight and wisdom of a lifetime's contemplation. In sheer brilliance of style he surpasses even his own previous high standard and has set his translators such an impossible task that even their moderate degree of success should be counted to their credit.[1]

The present work is important both as a document for M. Bergson's philosophy and as a contribution to ethics and

[1] The translation is accurate and intelligent, and supplies with great fidelity a somewhat sapless extract of M. Bergson's meaning. It loses much of his force and freshness, largely because, in matters of expression, it errs on the side of safety—surely a fatal error in any interpretation of the mind of M. Bergson. Moreover, instead of splitting up his paragraphs, which are often too long, it sometimes (beginning on p. 2) runs them together. On points of detail, "the motory faculty" (p. 12) is not good technical English, and *mysticité* (passim) should not be translated "mysticism". It is rather the *quality* attaching to the mystical. But these defects do not seriously stand between the reader and the philosophic pith of the matter, and, from this point of view, the translation can be commended.

the theory of religion. Its central theme is its sharp distinction, both within morality and within religion, between the "closed" or static and the "open" or dynamic. It purports to show that each of these moments has its place in the history of the life force, and that in current experience there are tensions and compromises which produce the illusion of a continuous line between the extreme cases, but that they are fundamentally divided by the metaphysical barrier, described in *Creative Evolution,* between life and materiality.

In the life of pure instinct, nature and habit agree in maintaining the conditions of survival, one of the most prominent of which is social solidarity. With the disturbing advent of reason, always potentially selfish, a system of useful habits grounded in instinct is converted into a massing of vital forces to crush the insubordinate. This social pressure is exercised in two ways. In the first place it appears in the form of obligation, which, at the root, is the concentration of the whole social order on the stabilising of individual wills (p. 15). (Such obligation need not take the form of constraint, for it follows a general biological law, and has its sanction *in foro interno.*) In the second, it operates through the "myth-making faculty" (*fonction fabulatrice*) as a "defensive reaction of nature . . . against the dissolving power of intelligence" (p. 101), "against the representation, by intelligence, of the inevitability of death" (p. 109), "against the representation, by the intelligence, of a depressing margin of the unexpected between the initiative taken and the effect desired" (p. 117). In the first case we have a response in action; in the other, a response of the imagination. In the first case we have morality; in the second, religion.

Any account of morality as social pressure, and of religion as serviceable myth, would seem to many to miss, in each case, the central phenomenon. They might admit that much current morality and religion was of this character, and still insist that the essence of the matter had not been touched. In that case M. Bergson would agree with them. He has described only one type of morality and religion, and he has

described it in its pure form, because he wishes to contrast it with another, and to insist that however intimately fused they may be in current practice they are essentially disparate and always potentially in conflict. So far we have had the "closed". Now we pass to the "open".

To take first the case of morality, it is to be noted that not all morality has its origin in social collectivity. The other source is the originating moral genius, who, resembling in this the angels of mediæval theology, is a whole social species in himself (p. 231). "Open" morality "must be incarnate in a privileged person who becomes an example" (p. 23). His mere existence suffices; he has no need for constraint or even for exhortation. Merely by being what he is, he has the force of an appeal.

But, if morality is to be truly "open", it cannot be limited in its application to any society. It must be human and not merely social. There are suggestions in the text that any universal morality will be "open". This is doubtful: a world community bound hand and foot by a "closed" morality is only too easily conceivable. But M. Bergson's main point is that there can be no social limit beyond which an "open" morality cannot go; and in this respect the contrast stands.

The moral genius, round whose universal appeal "open" morality revolves, is not necessarily a man of intellectual eminence. For Bergson, as for Pascal, morality is concerned with the *ordre du cœur*; and to progress in morals is to learn to feel more deeply and more truly on the broad human issues. "For them", says M. Bergson, alluding to the saints, "life holds an unsuspected resonance of feeling" (p. 29).[1] The central and original thing about Christianity, for example, is a new disposition of soul, which gives rise alike to Christian ethics and to Christian theology (pp. 45-46). Theory and behaviour alike issue from an emotional attitude (p. 36). Even rationalism, when dynamic, takes its rise from a new

[1] *"Des résonances de sentiment insoupçonées."* The translators render it, feebly and perversely, by "unsuspected tones of feeling".

emotion, as the case of Socrates, a mystic with a mission, goes to prove (pp. 47-48). From this angle, the history of morals is a history of master-passions.

Emotional sincerity, however, is not the only mark of "open" morality. Nazi morality, for example, is emotionally sincere, and its magnetic centre is a disinterested leader; but it would not even claim to be "open". M. Bergson deals explicitly with the sentiment of national exclusiveness, and ascribes it to the old "closed" morality, left-handedly reinforced by the expansive emotion proper to the "open". "Open" morality is thus not open in all directions: it is at least incompatible with a closed horizon.

This is a conclusion of some importance, for it defines the content of "open" morality, thus preparing the way for the further conclusion that the "open" attitude, both in morals and in religion, is one of "creative love". If "open" morality were compatible with *any* content, M. Bergson's views, while of interest to psychologists, anthropologists and historians, would have no immediate relevance to ethics, for they would then be concerned with the questions: What kinds of moral attitudes are there? and: How do moral attitudes change or become established? and not with the ethical question: In what does a moral attitude consist? As a matter of fact, the question of "sources" and the question of right are for M. Bergson inseparable, for his ethics are interwoven with his metaphysics, and his "reality" is a historical force.

There is one further distinguishing mark of "open" morality: it is "supra-intellectual", while "closed" morality is "infra-intellectual" (p. 50). This will become clearer when we come to consider as a whole M. Bergson's new view of the status of intelligence.

What is true of morality is true also of religion. The dynamic of religion is the individual mystic, whose insight M. Bergson reinterprets in terms of creative evolution. "In our eyes, the ultimate end of mysticism is the establishment of a contact, consequently of a partial coincidence, with the creative effort of which life is a manifestation. This effort is

of God, if not God Himself. The great mystic is to be conceived as an individual being, capable of transcending the limitations imposed upon the species by its material nature, thus continuing and extending the divine action" (p. 188). Where static religion plays for safety, dynamic religion experiments; where static religion impedes activity, dynamic religion lets loose such a flood of activity that civilisation is transformed. M. Bergson grasps firmly the connexion of religion with action, and therefore holds that "complete mysticism is that of the great Christian mystics" (p. 194). Greek and Oriental mysticism were too intellectualist, too static; to use the fashionable phrase, too "escapist". Only of the Christian mystics can it be said that "from their increased vitality there radiated an extraordinary energy, daring, power of conception and realisation".

M. Bergson's admiration for the great figures of Christendom should not lead us, however, to attribute to him their theology. His God is an immanent creative force, and the mystic who communes with Him, so far from being absorbed into a timeless transcendence, identifies himself with the concentrated drive of an historical process. M. Bergson claims that philosophical theology, as illustrated, for example, in the *Metaphysics* of Aristotle, is the result of intellectual abstraction, and even that it is non-religious. The proper method for a philosophy of religion is to start from the evidence of the mystic, the one really authentic source of religious knowledge, and "to question *experience* as to what it has to teach us of a Being Who transcends tangible reality as He transcends human consciousness". (Reviewer's italics.)

Unfortunately for M. Bergson, the mystics are by no means agreed on the philosophy of creative evolution: a census of their opinions would reveal an almost unanimous opposition. It is true, as he says, that the mystic is apt to adopt the intellectual formulæ of his environment; but while this may account for a past preference for transcendent theism, it may equally well account for M. Bergson's own transcription of the mystic's experience in terms of creative

evolution. The fact is that M. Bergson, like other philosophers, approaches the study of religion with a ready-made metaphysic, which his investigation may confirm, but of which it is certainly not independent.

His theory, as is well known, is that there are two orders of existence: life and materiality; that empirical events are the result of impact of an undivided life force on matter, which is both instrument and obstacle, and "divides what it defines" (p. 94); that life, as the moving and creative force in the world, insinuating itself into the crevices of matter, is the clue to all further advance, and, at the present stage of development, concentrates reality within itself; that matter (at any rate since there was life on the planet) is the principle of resistance and inertia, and that its predominance in living or thinking beings is a sign of deficient vitality; and that to understand life we must cease to approach it through the analytic method of science, and feel our way inside it by means of an intuition, which, involving as it does the alignment of subject with object, is even in its cognitive aspect mystical in character. These views reappear almost intact in the present volume, and lie at the root of the distinction between "closed" and "open" in morality and religion. The "closed" society is that in which life is separated out and congealed into material form. The "open" society is that in which life is concentrated at high tension, and in which its creative potency is therefore at its strongest.

The new context, however, throws some fresh light on the vexed problem of the status of matter. M. Bergson has frequently spoken as if matter were a sort of counter-reality. He is now at least ready to recognise the vital utility of a "closed" system of morals and religion. "All morality, be it pressure or aspiration, is in essence biological" (p. 82); and religion, as we have seen, is more than once described as a "defensive reaction of nature". The two types appear to represent two stages in the progress of life: what is the supreme achievement of life at one stage becomes an encumbrance as it proceeds to the next; though even then some

relation with the old order out of which it is struggling would seem to be essential. In the interesting sociological excursus which forms the fourth chapter, M. Bergson dilates on the alternation of mechanical and mystical elements in civilisation, and suggests that each summons up the other (pp. 267-268). At any rate as far as humanity is concerned, life carries materiality along with it, though, in its more creative moments, it breaks away to blaze the trail.

Still, making all allowances for his new civility towards the material, M. Bergson continues to maintain his dualism. There is no continuous passage between the "closed" and the "open" in morality and religion. They stand for two different principles, and the appearance of continuity is due to the compromise of our normal life. Actually we are under neither dominion, but are suspended between the two, and we find it hard to believe that we are facing in both directions at once. But it is true, all the same. Our spiritual life is not a harmony of similars, but a tension of incompatibles.

Further, there is no doubt on which side M. Bergson's sympathies lie. From the time of his early revolt against the materialism of the eighties, he has with unfailing consistency upheld the dynamic, the formless, the unexpected and the spiritual, against the static, the determined, the continuous, and the spatial; the concentrated current of life is real, and wherever it is dissipated or frozen there is a diminution of reality. This general attitude is as strong as ever in the present work. "It is always the stop which requires explanation, and not the movement" (p. 270). "The current of life . . . traverses matter, and . . . accounts for its existence" (p. 220). And the distinction between "closed" and "open" in morality and religion supplies a convincing illustration. "Open" morality is referred to as "complete and perfect morality" (p. 24). It stands to "closed" morality as *natura naturans* to *natura naturata* (p. 44). In the same way, while static religion, at the best, does no more than preserve a kind of biological morale, dynamic religion re-absorbs those who experience it into the vital current from which they are

separated by their daily life, producing in them the love and the serenity of those who are at peace with reality.

It will be seen that M. Bergson's new field of study has made no substantial impression on his philosophy, but simply confirms his older views. There is, however, one respect in which he appears to have changed his ground, and that is with regard to the status of intelligence. If, as he has previously asserted (esp. *Creative Evolution,* pp. 159-174, Eng. trans.), intelligence is only at home in a stiff block-universe, it ought to favour a "closed" society. But he understands well enough that the "closed" society is far from being based on reason, and he goes out of his way to show that reason has nothing to do with obligation (pp. 11ff). Intelligence is now assigned to the middle region between the "closed" and the "open". As mentioned above, the one is "infra-intellectual", the other "supra-intellectual". The sphere of intellectual morality, with its "half-virtue, detachment" (p. 51) is the uneasy period of transition, in which flashes of mysticism have disturbed the protective darkness of custom, but are still too strange and intermittent to illuminate the immediate path. In itself it is a shadow and a compromise; but for those of us who are neither saints nor mystics it is the best available mode of life.

This description of reason as the half-way house between instinct and intuition is much more persuasive than M. Bergson's earlier arraignments; it shows that he has begun to emancipate himself from the mock-scientific determinist conceptions of reason which he has shared with his materialist opponents, in favour of a more liberal and experimental interpretation. Moreover, it helps him to account for the fact that our current morality and religion, which are neither merely customary nor yet inspired, fall back on rationalistic formulæ. But it does not in the least bring him back to the rationalist fold. More than ever he insists that reality is to be attained by emotional transformation and by the active self-identification of the person with reality, which is the peculiar gift of the mystic. Indeed, the prolongation of the life force into its ultimate achievement in mystical experience only

emphasises the tentative and approximative character of rational inquiry.

It is impossible, in the space which a reviewer may decently occupy, to embark on a complete estimate of this important work. All that can be attempted is the discussion of a few salient issues.

(1) M. Bergson holds that both morality and religion can be either "closed" or "open". He thus comes into conflict with a widely shared view that all morality, as such, is "closed" and that religion, as such, opens it. M. Bergson would, I think, admit that "open" morality prolongs itself into "open" religion; that true morality, in fact, and true religion are interdependent; and this is the core of the view in question. But he would certainly, and rightly, deny the usual corollary that all religion is "open". As he shows by historical illustration, a "closed" religion closes morality more effectively than anything else does. The situation in morality is parallel with the situation in religion, and not, or not simply, complementary.

(2) Another useful service rendered by M. Bergson's bifurcation of morality and of religion is that it clarifies the concept of obligation. He boldly refers obligation to "closed" morality, and attributes it to the pressure of society rather than to "reason" or to "absolute values". He admits that the content of obligation changes with the advance of the vital current, being, in fact, the silt or sediment which it leaves behind it; but in the flow of the current itself the content is dissociated from the form. Duty is strictly utilitarian, and no part of the saint's vocation.[1]

This is an important contribution, and it is to be hoped that it will draw attention to the pernicious influence of political metaphor on the theory of morals (and, for that matter, on theology). To place obligation in the centre of

[1] The saint, of course, is not a saint all the time, and when the tension of his being slackens he is naturally thrown back on obligation, purified of its grosser features by his own high understanding of life. But, *qua* saint, he lives in a different world from that of obligation.

morality is to define man as a potential criminal, or, at the best, to prescribe for the normal healthy person the regimen of a hospital. That the line should be drawn so cleanly between obligation and "complete and perfect morality" is a consolation to those who are somewhat weary of the tedious analyses of duty in recent ethical theory.

(3) In dealing with "open" morality, M. Bergson concentrates on the attitude and not on the end, implying that the attitude, if it has full scope, will find its own end. Here again M. Bergson appears in the rôle of a deliverer. There are many "ends" recommended by generalisations from a limited experience, but they all turn out to be relative, and those who take them as absolute are condemned in the long run either to scepticism or to deliberate blindness. As the facts change, they change. What does not change is the spirit which gives rise to them, each in turn. In finding the essence of morality in the mobility of creative love, M. Bergson is unquestionably right.

(4) M. Bergson appears to infer from the views set out above that there is no such thing as teleology; this is, indeed, frequently asserted in *Creative Evolution*. If by teleology is meant a fixed march to a predestined end, he is clearly right both in objecting to it in itself, as inconsistent with genuine moral discovery and in holding it to be inconsistent with his own position. But he himself insists that there are certain forms of behaviour—those, for example, based on national exclusiveness—which are irreconcilable with "open" morality. In other words, "open" morality has a sense of direction. It is moving towards something, though whether or how it will get there is an open question. This much teleology must be admitted, for the only alternative is to deny specific character to the moral attitude, and to class as "completely and perfectly moral" any dubious venture recommended by enthusiasm and spontaneity.

(5) M. Bergson's theory of mysticism, and the central place which he gives in religion to mystical phenomena, is certain to arouse a wide interest. It depends, as we have

seen, on a metaphysical position, which will be estimated according to the value assigned to his central conception of the vital current. This being granted, it is both consistent with his explanation of nature, and a brilliant explanation of the facts. This does not prove that it is true, but it certainly establishes its right to be carefully and sympathetically considered.

(6) The account of morality and religion as the products of a tension between two principles is strictly in accordance with the facts. How else can we account for the struggles which go on inside their borders, while sceptics and atheists look on and smile? Especially significant is the passage where M. Bergson explains why he calls both sets of experiences by the same name (p. 183). Our life is a meeting-point of two orders, predominating variously in epochs and individuals, but, in themselves, distinct, and not to be resolved into each other. The single name brings home both the unity of the experience and the hostility of the elements united. But the greatest personalities are those in which the vital impetus rises above the discrepancy and carries the recalcitrant material forward in a full current of creative joy.

A. Boyce Gibson.

Education of the Slow-Learning Child. By C. P. Ingram. George G. Harrap and Co. Ltd., London, 1936. Price: 7s. 6d. net.

The author is Supervisor to the Department of Child Study and Special Education at Rochester, New York State, and the material of the book is drawn in great part from the results of experiments made in that city.

For some time now educators have become conscious of the difficulty of teaching together bright, normal and dull children, and the first result of the recognition of this difficulty was the segregation of the dull children in special classes, the very dull often in special schools. There has, moreover, not

been lacking the tendency to separate specially bright children from normal children. While certain difficulties, such as keeping bright children fully occupied and out of mischief, and not requiring dull children to work beyond their capacity, disappeared with the establishment of special classes, yet the appearance of special classes tended to raise difficulties or create disadvantages of their own. For example, undesirable social results sometimes followed the placing of an older pupil among much younger ones. The experiments carried out at Rochester claim to have overcome this second set of disadvantages.

The author believes "the basic principles and practices in an adequate programme for the slow-learning child to be the same as those for all children". Therefore, "education of the slow-learning child has been increasingly regarded as an integral part of the general school programme, demanding the same intelligent and scientific consideration as does the programme of the normal child". What is needed for the slow-learning child is "not a reduced content of the regular school curriculum and repeated drill, but an especially planned programme".

The reader will not be surprised therefore to find that the book is given up greatly to the discussion of planned programmes. As these are the result of careful thought and experiment, those concerned with the problem of the retarded pupil will find much assistance from the study and perusal of the book. Moreover, the facts and principles applied to the education of the seriously retarded are also shown in the second part to be applicable to the education of the large group of "dull normal", whose school programme must also be given special consideration. The book provides a comprehensive treatment of the problem of retardation in schools with practical recommendations of such a detailed and well-attested nature that readers must profit greatly from the experiments made and the exposition of them that is here given. Probably the most interesting feature is the way in which a retarded child may, through having his whole circumstances considered,

be yet grouped with children of his own age. For example, "Sarah, a fourteen-year-old girl with seven-year mentality and a hearing defect, although having no ability along academic lines, develops more effectively in a group of girls of about her own degree of physical maturity, where she can enter into games and rhythms and participate in simple home economic practices and other activities suited to her age, than she does with younger children of mental ability more nearly like hers". This gives the key to the practical part of the book (the earlier part of the book is given over to a discussion of "Facts and Principles"), and requires that the school curriculum must be more than academic studies, must comprise "Units of Work" representing wholes of life. To the reviewer, this attitude seems reasonable, and it does seem to result in overcoming the difficulties issuing from segregation along with younger children for purposes of academic study alone.

H.T.L.

MATHEMATIQUE ET PHILOSOPHIE. By R. Wavre. Pp. 16. Price: 3 fr. b.

LA CAUSE ET L'INTERVALLE, OU ORDRE ET PROBABILITE. By E. Dupréel. Pp. 51. Price: 8 fr. b. Archives de la Société Belge de Philosophie, Vol. V, Nos. 1 and 2. Brussels: Lamertin, 1933.

These papers, as in the case of the two from this series previously reviewed in the Journal, are concerned with borderline questions of science and philosophy, or, it might be more exact to say, with the philosophical questions which scientists feel impelled to take up. The amateur philosophisings of scientists are indeed a noteworthy phenomenon of our times, and, apart from the undue deference which has been paid to them in philosophical circles, they have been largely occasioned by the failure of philosophers to set their house in order by concentration on logic and refusal to countenance exploded doctrines. Thus Wavre opens his summary account of the logical implications of recent developments in mathematics by specifying the different views which may be taken "suivant

l'école philosophique à laquelle on se rattache", viz., mathematical realism, idealism and empiricism, the second of these being described by saying that the objects of mathematical study "peuvent être conçus comme identiques à la pensée qui les invente et c'est idéalisme pour lequel le summum et le caractère spécifique de l'être c'est d'être pensé". So long as such a view retains any philosophical standing, scientists will lack the philosophical guidance they require.

It would certainly save mathematicians much confusion and trouble if they would realise that to think or say anything is to think or say that something is the case, that there is no question of "notions" apart from propositions, of "primitive" propositions as distinguished from facts, of a "universe", "external" or otherwise, of which we can have an "image", accurate or otherwise; no question, also, of a "criterion" of truth—if the mathematician discovers non-contradiction, he discovers it as a fact and as holding among facts. And if he calls anything an "axiom", he has still to *assert* it and in so doing attribute to it all the "concreteness" and "externality" that anything could have. The question regarding Euclid's postulate is not what "degree of evidence" it has, but whether it is true. It is only on the basis of bad philosophy that the supposition of an internally coherent system, without relation to actuality, or of a complete co-ordination of all possible experiences, "une interdépendence mathématique entre nos sensations", could arise. Our sensations, in the sense of what we observe, are propositions and are sometimes false, and it is not the business of mathematics or physics to study the conditions of false belief but to discover truths independent of our proceedings.

The root of the trouble is rationalism—the attempt to find certain ultimates, certain identities from which a whole theoretical system will flow, certain principles which (according to what Wavre calls Laplacian determinism) will account for all phenomena, from the remotest past to the most distant future. If scientists, in their endeavour to deal with actual things (i.e., with non-identities), could be induced to drop the whole identity-philosophy, progress might be made. But,

failing to dispense entirely with rationalism, they fall into various forms of pragmatistic relativism (various ways of making jumps between the stops), the most notable of which is the doctrine of probability.

The main application which Dupréel makes of his theory, viz., to the question of the origin of life, is unimportant. He considers that an account of this phenomenon will be one which makes it more probable than not, whereas the causal hypotheses alike of vitalists and of the exponents of "brute chance", "laissent l'esprit insatisfait: la vie demeure, ainsi presentée, *invraisemblable*" (p. 34). But, we may ask, why not? Its improbability merely amounts to the fact that a thinker, with certain limited information, could not have predicted it. But the fact is that, without previous experience of the passage of the non-living into the living (or whatever transformation may be in question), a thinker could not predict it at all. The important point, then, is the general one that prediction depends on experience of connections between sorts of things, and, whether we are correct or mistaken in recognising any given connection, the question of probability does not arise.

Dupréel starts out from Hume's point that cause and effect are distinct, but does not grasp the outcome of Hume's argument, viz., that relations are not forms of identity. What he does is to *qualify* the "tie" by the "interval", which may be temporal, spatial or "logical" (i.e., the difference between cause and effect may be just a difference). In the interval (conceived chiefly as temporal, though the fact that effect succeeds cause is not the least reason for supposing a *gap* between them) various factors, favourable, unfavourable or indifferent to the production of the effect, may enter. All that positively emerges from this theory is that we are often mistaken in our causal beliefs. But Dupréel could explain what he means by "favourable" and "unfavourable", and, still more obviously, by some factor *preventing* the usual effect, only in terms of the "strict causality" he is trying to qualify.

No doubt, if the theory of strict causality is taken to be that of causal *chains*, difficulties are bound to arise. But

Dupréel's difficulties would be solved by a recognition of interaction (which may as fitly be called "classical" as any theory of single-track development), and, in particular, by the recognition of the *field,* i.e., of the fact that it is not a question simply of A causing B, but of *a certain sort of thing X* becoming B under the condition A, whereas Y may not do so. We may make mistakes about any of the factors or connections in such situations, but our mistakes are nothing against strict causality. In short, pluralism can deal with the various problems that arise, but a half-way rationalism leaves us not with science but with guesswork.

J.A.

NOTES AND NEWS.

Congress of the Association.

The Australasian Association of Psychology and Philosophy will hold its Congress at Melbourne University on May 20th–22nd. The following meetings have been arranged:

Thursday, May 20th:

Morning: Professor John Anderson, "Marxist Ethics".

Afternoon: Dr. J. K. Adey (Medical Superintendent of Royal Park Mental Home, Melbourne), "What is permanent and what is transitory in the work of Freud."

Evening (Public Lecture, with charge for admission): Professor A. F. Giblin on some problem connected with the theory of democracy.

Friday, May 21st:

Morning: Address (details not yet arranged).

Afternoon: Symposium, "The Conception of Instinct". Professor H. Tasman Lovell, Mrs. O. M. Warren, Dr. P. M. Bachelard.

Evening: Reception to visiting members.

Saturday, May 22nd:

Morning: Presidential Address by Professor A. Boyce Gibson, "Can reason influence conduct?"

It is hoped that successful arrangements may be made to secure favourable travelling terms to Melbourne for visitors and, especially, senior students from other centres. The generous provision of hospitality by Melbourne members and friends should ensure a more than usually representative and interesting Congress.

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THE ANATOMY OF DEMONSTRATION.

By H. G. FORDER.

1. IT would seem rather late in the day to discuss whether mathematics is self-consistent. A subject which in its pure state has been developing with ever-increasing rapidity for centuries, and is continually putting forth new shoots, and in its applications has been all-powerful in astronomy, of equal importance with experiment in all branches of physics, which is the key, if any exists, to the structure of atoms, of stars, and of the universe, and which is now conquering stretches of chemistry and even of biology, economics and philosophy, it would seem that such a subject, if any, must give mankind the absolute certainty for which it longs. A deeper study, however, raises doubts, and these are of no recent date. The sceptical mind of the Greek is seen at work in the treatment of proportion in Euclid's fifth book, and doubts were early expressed of the validity of the methods used by the founders of the differential and integral calculus, and their immediate successors. Interested mainly in the applications of the new methods to problems presented by the external world, the mathematicians of the eighteenth century left as a question for others the logical analysis of the processes they used. This was undertaken in the first half of last century; infinitesimal quantities—the 'ghosts of departed quantities', as Berkeley called them—were banished from mathematics and at the same time the loose treatment of infinity was repudiated for ever. But when the analysts had completed their task, and had rejected the infinitely small and the infinitely great from their work, they still retained, at any rate, one infinite set, namely, the infinite set of natural

numbers. In fact, the object of many was to found the whole of mathematical analysis on the properties of the natural numbers. This is only possible in part, for besides the natural numbers we have to introduce the notion of a continuous set or continuum. Nevertheless, the present procedure in the usual mathematics is so rigorously logical and painstaking, that we can assert that whatever logical difficulties remain centre round three things: (1) the logical principles themselves, (2) the properties of the natural numbers, (3) the properties of the continuum. I shall only deal with the first two.

2. One of the features of the mathematics of this century is the stress laid on axiomatic methods: developed at first for the older subjects, these methods have proved a powerful means for creating and conquering new fields. Consider any deductive science such as the traditional geometry. It is a body of propositions, each of which is proved from previous propositions; an infinite regress being impossible, it is plain that some propositions must serve as starting points of the development; we call these *'axioms'*. The science will also use certain technical terms, e.g., circle, parallel; these will be defined by means of earlier terms; clearly, then, some terms must serve as starting points for the definitions; we call these *'undefined terms'*. Our axioms will be statements involving the undefined terms; all other propositions will be proved from these axioms, all other terms will be defined by means of the undefined terms. Thus, in geometry, our undefined terms may be simply *'point'* and a three-termed-relation *'between'* holding for certain ordered triads of points. If the work has been done properly and all axioms assumed are explicitly stated, however trivial they may seem, and if our deductions are rigorously logical, the arguments used could be followed even if no particular meaning were attached to our undefined terms. The whole position was summed up by Russell in an oft-quoted and usually misunderstood quip: "Mathematics is the subject in which we never know what we are talking about, nor whether what we are saying is

true." The meaning of the undefined terms is irrelevant, and so is the truth of the axioms. Only the form, not the content, matters. Of course, if a deductive theory is to be more than a waste of time, it will be possible to attach meanings to the undefined terms, thus giving an application of the abstract scheme; and it is always the case that a variety of meanings, often totally different, can be given. If this could not be done, a deductive theory would be as pointless as bridge or chess.

Some of the terms used in the deductive theory will, however, have their usual meaning. Consider the following proposition: "Suppose 550 men are distributed into 50 cricket elevens on Monday, and again (differently) on Tuesday. Then, however they are distributed, it is possible to arrange the batting so that the same 50 men bat first in their teams on both days, the same 50 bat second on both days, and so on." This proposition can be generalised, the numbers 50 and 11 being replaced by a and b; but what I wish to bring out is the obvious fact that the proposition has nothing to do with cricket or the days of the week. It is a proposition about the arrangement of elements in classes. What the nature of these elements and classes may be, is irrelevant, but they must be truly elements and classes. So in abstract geometry, 'point' and 'line' need not be spatial entities, nor need 'between' be a spatial relation, but a 'point' must be an element, a 'line' a class of elements, and 'between' a relation holding for certain ordered triads of elements, and here 'element', class', 'ordered triad' have their usual meaning. Thus the formalising at this stage is partial and not thorough.

We may illustrate the position by quantum mechanics, that branch of physics which gives the only key at present known to atomic processes. Dirac starts with an abstract mathematical scheme, and he gives rules for working within this scheme. When the work has reached a certain stage of development, it is given an interpretation with a physical significance, and its results can be compared with experiment.

In this way, e.g., the existence of the positive electron was predicted before it was discovered.

The formal axiomatic view I have just described had replaced the traditional views amongst the younger mathematicians at the beginning of this century; it now seems so obvious that it is hard to believe that any other was ever entertained. It must be emphasised here that I am considering only *logical* questions; questions of epistemology, psychology, and so forth, which are apt to get mixed up with logical questions, are, in the formal axiomatic method, completely ignored.

3. I have said that the difficulties of mathematical analysis centre round the logical principles, the natural numbers, and the continuum, and that the analysts of last century, while rejecting the loose treatment of infinite quantities, had retained the infinite set of natural numbers. In the early nineties, following the still earlier work of Dedekind, Peano enunciated the basic properties of the natural numbers, and it soon became clear that, if we ignore the very considerable difficulties of the theory of the continuum, the whole of mathematical analysis could be erected on the foundation laid by Peano. But Peano did more than this, he realised the youthful dream of Leibniz by providing a workable logical calculus; in a profound analysis of mathematical reasoning, he disentangled and systematised the logical methods employed, invented symbols for the fundamental logical notions and gave rules for their use. As a result, it is now possible to write out any mathematical proof, without using any word of the ordinary language, but to set it forth entirely in symbols, and to proceed in the reasoning according to exactly formulated rules, just as we do in manipulating algebraical expressions.[1]

For example, if p and q be any propositions, we may write pq or p & q for their joint assertion, p v q if at least one

[1] The symbols we use here are not in entire agreement with those of Peano's Formulario. I am ignoring unessential details of the history of the subject.

is true, $p \to q$ if p implies q, and $\sim p$ for the contradictory of p. By means of these symbols, and a few others, Peano formalised the whole of elementary mathematics up to the existence theorem of ordinary differential equations. Peano's axioms of natural number depend on the undefined ideas of 0 and 'immediate successor of'. If a is a number, and we denote the immediate successor of a by a^1, the axioms are then essentially

$$\text{(i)}\ \sim(a^1=0) \qquad \text{(ii)}\ a^1=b^1 \,.\equiv.\, a=b$$

$$\text{(iii)}\ f(0)\,.\,(a)\big(f(a)\,.\to.\,f(a^1)\big) :\to : (a)f(a).$$

The first asserts that 0 is not the successor of any number; in the next, the symbol $\equiv$ indicates that each of the propositions $a=b$ and $a^1=b^1$ implies the other; the whole axiom, therefore, means that each number has just one immediate successor, and that two distinct numbers cannot have the same immediate successor. The third axiom gives the principle of induction: f(a) represents any statement on the number a. [The "any" here must be taken *cum grano salis*; to limit it would take up too much space.] (a)f(a) means f(a) is true for all numbers a. The third axiom then says that if the statement represented by f is true for 0, and if its truth for any number implies its truth for the next number, then it is true for all numbers.

It is necessary to point out a difference between the formal treatment of geometry and the formal treatment of arithmetic. Geometry can be formalised so that any elements and relations whatever which satisfy the axioms may be regarded as those which the geometry treats. But the natural numbers are quite definite things satisfying the axioms of arithmetic: it is true that other sets of things also satisfy these axioms, e.g., a row of houses with a beginning but no end, any one of which can be reached step by step, but nothing given in thought or experience is related to the axioms of geometry in the unique way that the natural numbers are related to the axioms of arithmetic. If we say that the 'sum of two numbers is a number' we might mean by 'number' anything

satisfying Peano's axioms, but by 'two' we must mean 'the natural number two', and not simply one of the things which satisfy the axioms. In short, the axioms of abstract geometry say all we mean; Peano's axioms when regarded as applying to natural numbers, do not.

We can define addition of numbers thus:

$$a+0=a \qquad a+b^1=(a+b)^1$$

and multiplication thus:

$$a.0=0 \qquad ab^1=ab+a.$$

These are 'definitions by induction'. For example $a+b^1$ is defined in terms of $a+b$. It is the principle of induction and these definitions which cause all the trouble. We can, of course, write 1 for 0^1, or 2 for 1^1 and so on. These are merely abbreviations in the writing.

Suppose now we wish to prove any proposition about natural numbers. We have the above axioms stated formally, we have the rules of the logical calculus; we can state formally the proposition to be proved; our task is then to move our symbols about in accordance with the rules of the logical calculus, from the places they have in the axioms to the places desired in the formal statement of the proposition to be proved.

Before we give examples of this we explain two symbols: if $f(x)$ is any propositional function such as 'x is a prime number' or 'x is greater than 5', then $(x)f(x)$ means this propositional function is true for all x in the universe of discourse, in our case, natural numbers, while $(\exists x)f(x)$ means it is true for at least one x. We used the first symbol in the principle of induction above. These symbols can also be used in connection with propositional functions of more than one variable, such as $x<y$, 'x is less than y'. Thus $(\exists x)(y)(y<x)$ means 'there is an x which is greater than all y'; while $(x)(\exists y)(y<x)$ means 'whatever number x is, there is a smaller number', while $(x)(\exists y)(x<y)$ means 'whatever number x is, there is a larger number'. The first two are false for natural numbers, the third is true.

We now consider two examples of theorems in arithmetic. "Every number is the sum of four squares", symbolically $(x)\,(\exists a)\,(\exists b)\,(\exists c)\,(\exists d)\; x=a^2+b^2+c^2+d^2$; as products and sums have been defined above, and a^2 means aa, the symbolic statement is complete. Take again the conjecture of Goldbach: "every even number is the sum of two primes". We will write $P(x)$ for the propositional function "x is a prime number", and define it as follows: $P(x)$ is an abbreviation for

$$x>1\ .\ \&\ x=yz\ .\rightarrow.\ y=1\ \vee\ z=1,$$

that is "x is greater than 1, and if it is a product of two numbers, one of them is 1". Then Goldbach's conjecture is

$$(x)\,(\exists y)\,(\exists z)\quad P(y)\ \&\ P(z)\ \&\ y+z=2x.$$

To prove either of these theorems, all we have to do is to move the pieces about in accord with the logical rules, starting from the axioms, until they are in the positions required. The first is an old theorem, proved by Euler long ago; but no one knows whether the second is true or false.

Some examples of logical rules:

(i) If we have p and $p\rightarrow q$, we can write down q.

(ii) If we have $p\rightarrow q$ and $q\rightarrow r$, we can write $p\rightarrow r$.

In these p, q, r may be any propositions of any complexity. Next suppose $f(x)$ is any propositional function, of any complexity:

(iii) If we have $(x)f(x)$, we can write $(\exists x)f(x)$.

(iv) If we have $p\rightarrow f(a)$, where a is not contained in p, we can write $p\rightarrow(x)f(x)$. It is quite a serious task to formulate a minimum set of logical rules from which follow all those needed in demonstration, and a very great deal of time has been spent on this question.

It should now be clear that when we have formalised any mathematical doctrine, its development can proceed (or we may pretend it can proceed) automatically in accordance with the rules of the game; we could imagine a machine, like the logical piano of Jevons, or the instrument which Gulliver saw in the academy of Lagado which would turn out any possible

proof.[1] Unfortunately, human intelligence is so feeble that the logico-mathematical game presents tremendous difficulties to us all.

4. An enormous monument to Peano was erected in Whitehead and Russell's *"Principia Mathematica"*. The object of that astonishing achievement is rather different from that of the investigations I am about to discuss. *Principia* attempted to deduce all mathematics from logic by logic. It began with a complete account of the Peano logic, refined and extended. To found mathematical analysis it was necessary to reduce to logic the doctrine of natural number and the continuum, and this was achieved by giving a definition in logic of the first and a constructive theory of the second. Another object of the work was to explain away certain paradoxes that had arisen in the theory of infinite sets; these were tracked down to logical paradoxes and removed by the theory of types. It was the discovery of these paradoxes which caused most of the disquiet, for the arguments which produced them bore some resemblance to those occasionally used in the traditional mathematics, and the theory of types which removed them worked havoc with some of the proofs for the fundamental theorems of analysis. The desire not to be expelled from Cantor's paradise and the necessity of putting analysis on a more satisfactory basis (if it was to be retained unchanged) were the main causes for the later work of Hilbert.

The amazement produced by the three volumes of *Principia* has been somewhat abated by time, and its imperfections have to some extent been removed, but it is the subsequent development by Hilbert and his followers, rather than the *Principia,* that I wish to describe.

5. Hilbert has a different point of view and a different set of problems from *Principia*. Whereas *Principia* sought to deduce all mathematics from logic by logic, Hilbert points out that certain extra-logical things are necessarily involved. We

[1] I believe Swift's satire was directed against Leibniz's first attempts at a logical calculus. It was as amusing and as misdirected as his attack on the mathematicians.

use symbols, recognisable marks on paper, or ideas in the mind. We must recognise the same symbol as the same in its different occurrences, we must view it in its relation to the symbols which accompany it. The symbols themselves may sometimes take charge. Thus a+b=b+a may be a significant or even an important proposition in some doctrine, while in another it may merely occur because we cannot print *a* over *b*, or think of them simultaneously. The insistence on this extra-logical nucleus may be merely a shift of emphasis, though I think it would affect the technical development of the *Principia* doctrine, but its most important consequence is the questions it suggests.

6. Why is not mathematics an immense tautology? I have begged the question here, for some thinkers, mathematicians like Hahn, have maintained that all mathematics is tautological, which I suppose means that the innumerable theorems in so many books and papers are merely complicated ways of saying "A is A". I certainly cannot subscribe to this doctrine, if that is what is intended. But algebraical identities may be regarded as tautologies. Take e.g. $a^2-b^2=(a-b)(a+b)$. This is proved by working out the right hand side in accordance with the algebraical rules and transforming it to the left hand side. But all mathematical theorems or problems are not of this trivial nature. Take for example the problem, fill in the brackets in $[\ ]^2+[\ ]^2=[\ ]^2$ by polynomials in x. When this is done we should have a tautology; thus $(x^2-1)^2+(2x)^2=(x^2+1)^2$ will meet the case, but it is obvious that it might be very difficult to find the required polynomials. Now go a stage further: fill in the brackets in $[\ ]^3+[\ ]^3=[\ ]^3$ with polynomials in x. This cannot be done. The proof that it cannot be done is evidently a very different kind of thing from the verification of an algebraical identity actually exhibited. To see that a jigsaw puzzle has been properly fitted together is much easier than to fit it together or to prove that it will not fit together. But is all mathematics, once it is set out, tautological? To assert that it is so, seems to me merely to be saying that the logical

rules have been observed in its construction. A genuine mathematical proof is never a bubble to be pricked, leaving nothing.

A related question is, "How can mathematics develop a new truth?" Poincaré suggested that it was the principle of induction which evolved new truths, but this is not used in some branches, e.g., projective geometry. The mystery here has, I think, been much exaggerated. A house is implicit in the materials used to construct it, but a heap of bricks, plaster, and glass, is very different from a finished habitation. So all theorems proved are implicit in the axioms, but the cross-threading, and welding together, of strands derived from combining axioms may result in a construction altogether surprising, but not more surprising than a symphony constructed from a finite number of sounds made on a finite number of instruments.

There is one point in connection with the above algebraical example on which I wish to dwell. We considered whether certain formulæ were possible, we asserted that one was not. In doing this we are viewing algebra from the outside, as a play of symbols, and are saying that such-and-such combinations are or are not possible. We shall soon be considering a similar set of questions in logic.

7. Given any set of mathematical axioms, how shall we prove that they are self-consistent, i.e., that they never lead to two contradictory theorems? This old question arose naturally in connection with such subjects as non-euclidean geometry, and was easily answered in part. Non-euclidean geometry, like euclidean geometry, can be translated into algebra; this is in fact done for euclidean geometry in the usual coordinate geometry. Any contradiction in the geometry would then be matched by one in algebra. The question, then, is whether algebra and analysis are self-consistent. The question of consistency in any mathematical subject, if the question is at all difficult, is practically always reduced in this way. As we are avoiding the continuum, and as there is no doubt that algebra (as distinct from analysis) can be

built up from arithmetic, our question is then: are the axioms of arithmetic self-consistent or do they lead to contradiction? We must at this point emphasise that the axioms of arithmetic with the usual interpretation relate to an absolutely infinite set of natural numbers, already there, as it were; and we may add that it can be shown that no finite set of things can satisfy these axioms. This prevents us from settling the question in a way analogous to the following:

Suppose at the basis of a mathematical doctrine we have a set of things, call them 'points', and a set of classes of these things, call them 'lines', and suppose the following axioms hold:

(1) Each pair of distinct points is in just one line.

(2) Each pair of distinct lines includes just one common point.

The student of projective geometry will recognise these as two axioms of a possible treatment of plane projective geometry. We can show these axioms are consistent by exhibiting a set of things which satisfy them. Take a set of seven points, and name them 1, 2, 3, 4, 5, 6, 7. Consider the scheme

1 2 3 4 5 6 7
2 3 4 5 6 7 1
4 5 6 7 1 2 3,

and suppose that three 'points' whose names are in the same vertical row are in the same 'line'. We find by testing that two 'points' lie on just one 'line' and two 'lines' contain just one common 'point'. This establishes that the two axioms can never lead to a contradiction. Now such a simple proof is only possible because we can exhibit a *finite* number of things which satisfy the axioms. Such a proof is not possible for the axioms of arithmetic because no finite set of things can satisfy them.

8. Thus to discuss the consistency or otherwise of the axioms of arithmetic we must proceed in an entirely different way. We must consider all possible proofs which can be built up on these axioms, and we must show that no two proofs can ever lead, the one to a proposition p and the other to its

contradictory not-p. Now we have seen how proofs can be completely formalised, and deductions reduced to set rules. Then just as in the algebraical case given above, where we viewed the construction of formulæ from outside, so here we may view demonstrations from outside, treating them as a game on the symbols played in accordance with certain rules, no longer attending to the meaning of the symbols used, but only to the rules for putting them together and transforming their combinations. Just as in an earlier section we viewed geometry formally, so here we view logic and arithmetic themselves formally. This is Hilbert's method.

The question of consistency, then, is this: can we by our rules construct a certain combination of symbols, say, p, and by another route construct the combination $\sim$p? It can be shown that if we can do this, we could by our rules construct the combination $\sim(0=0)$. Thus we have to show that in all the infinite number of possible games, we can never end with this combination. This method of regarding mathematical demonstration from outside and considering its possibilities, was at first called 'metamathematics' by Hilbert, but he now seems to prefer 'Beweistheorie'. A metamathematical theorem is one about possible mathematical proofs: it may be compared with a theorem on chess, "two white bishops in the course of the game can never be at opposite corners of the board". A metamathematical theorem has of course to be proved, but in proving it we consider possible combinations of the symbols, disregarding their meaning, and it is a theorem on these possible combinations. In metamathematics, mathematics becomes, as it were, self-conscious and indulges in introspection, turning its weapons against itself.

When Hilbert first put the question he had little doubt that the self-consistency not only of arithmetic and thereby of algebra, but also that of analysis could be proved by his method. Unfortunately, there are grave difficulties even for arithmetic. In a famous and sensational paper Gödel showed in 1931 that the consistency of arithmetic cannot be shown

inside arithmetic. Let us call the system formed of the axioms of logic and our two axioms of arithmetic and our definitions of sum and product and all formulæ which can be deduced from them by the logical rules, the system P. Gödel's result is that the formula which states the consistency of arithmetic is not part of system P; in fact if there were a proof in system P which ended with this formula we could construct from it a contradiction. This leaves the loophole that the consistency of P might be shown in a wider system, and this was, in fact, done by Gentzen in 1936. To prove the consistency of arithmetic it is necessary to go outside arithmetic and to use some notions analogous to those of the simpler transfinite ordinal numbers. The proof thus involves more than the notions whose formal expression is the system P, but it avoids what I will call dangerous deductions. The explanation of these will lead to some interesting questions.

9. Consider arithmetic again, and to fix ideas, take Goldbach's conjecture: "every even number is the sum of two primes." Considered in itself, I suppose it is *either* true *or* false; but the method by which it would be proved, if it is true, is very different from the method by which it would be disproved, if it is false. To prove it we should have to construct a general theorem on *every* even number. To disprove it, we need only give *one* even number for which it is false. Now is it not possible it may be impossible to do either the one or the other, to construct a general proof of its truth, or to construct an instance of its falsity; is it not possible that it may be neither provable nor disprovable? Must we not allow, as in Scotland, a possible verdict 'not proven'? This seems to be the view of Brouwer in his denial that the *tertium non datur* applies to infinite sets. I am not sure that I understand Brouwer's work (and part is inaccessible to me), but in his rejection of the law of excluded middle, he seems to mean that we must not say that a theorem like Goldbach's conjecture must be either true or false, because it is possible that it may be neither provable nor disprovable. I will call the assumption that a theorem on infinite sets must be either true

or false a 'dangerous' assumption. Another typically 'dangerous' method may be illustrated from analysis. If we have any arbitrary set of real numbers in order, each greater than the preceding, but all less than some fixed number, it is usually assumed that there is just one number greater than all numbers of the set and less than all other numbers greater than all numbers of the set. The point is that the existence of a certain number is asserted, although the number is not constructed. We should have the same situation in geometry if we asserted that an interval of a straight line had a mid-point, but gave no construction for finding it. We call such existence theorems 'dangerous'. An existence theorem for which the object, whose existence is asserted, has been previously constructed, is not dangerous. Now Gentzen's proof that arithmetic is self-consistent, although it is not shown inside arithmetic (we have seen that that is not possible), nevertheless does not use 'dangerous' methods of proof. But it uses a constructive version of transfinite induction, that needs very careful attention.

10. We have not yet answered the question whether there are theorems in arithmetic which can neither be proved nor disproved. Before we deal with this, consider an old instance. It has long been known that if from the axioms of euclidean geometry we omit the parallel axiom, we cannot then show that the angle-sum of a triangle is two right angles. Indeed, there can be nothing surprising in the fact that if an axiom is omitted from a set, some theorems, previously provable, cease to be so. But the fundamental axioms of arithmetic do seem to exhaust the subject, they have not the appearance of a torso, and it is surprising that, as Gödel showed in his paper above mentioned, undecidable theorems can be stated, i.e., a theorem can be stated in system P which cannot be either proved or disproved inside P. His method is of great interest. He considers, of course, that the theorems of arithmetic with their proofs are written out in symbolism; altogether he needs, besides letters, only seven basic symbols, including brackets; now as we are taking the meta-

mathematical point of view in which the symbols are merely pieces in a game, their shape is of no consequence, and we can replace them by numbers. It is then easy to give a rule which assigns a definite number to each formula in P; a proof in system P is then replaced by a succession of numbers; such successions can always be arranged in "dictionary order", that is, in the order of magnitude of their first numbers, and if these first numbers are equal, in the order of magnitude of their second numbers, and so on. Thus each proof, or rather each succession of numbers which replaces the proof, will have a number attached to it, viz., its number in the dictionary order. Gödel then is able to define arithmetically the proposition: "the proof numbered x is a proof of the formula numbered y." By means of this he is able to construct a proposition which can neither be proved nor disproved inside P, the proof of these impossibilities being inside P.

11. Just as the consistency of arithmetic, though not deducible inside P, can be shown in a wider scheme, so a proposition which is undecidable in P may become decidable when a wider scheme is used.

A related question is that of the 'depth' of a theorem. It is perplexing that some theorems in arithmetic should be easy to prove, while others not apparently more difficult should defy the power of the most advanced analysis. Goldbach's conjecture is a case in point. It has been pointed out by Gödel that a rise in type permits an immense shortening in the proofs of some theorems. Type is here used as in *Principia*. Individual numbers are of the first type, classes of numbers, classes of classes of numbers, . . . are of the second, third, . . . type. If we allow only those infinite sets of numbers, e.g., primes, which are definable in terms of the axioms of P, we are obviously in a narrower field than if we allow arbitrary infinite sets of numbers to enter, while we widen the field still more if we allow arbitrary infinite sets of such sets. The introduction of arbitrary infinite sets is equivalent to passing from arithmetic to analysis, since a real number may be made to correspond to each such set. This may perhaps

throw some light on the fact that theorems in arithmetic are often more simply shown by analysis.

12. So far we have considered logical questions only, and it is with much fear that I put a psychological question: "Why do we assent to demonstration?" Those who regard mathematics as tautological have here no difficulty, since demonstration, they believe, gives nothing new. For them mathematics is in the position of pure logic, all propositions of which say the same thing, namely, nothing (Wittgenstein). But if we reject this view of mathematics, the question is not answered so easily, and we must face the fact that some proofs regarded as valid by some mathematicians are rejected by others. Proofs of theorems in the ordinary calculus accepted in the eighteenth century would not be accepted now, and at the present time proofs involving the multiplicative axiom are in dispute, and some of the mathematics till recently almost universally accepted has been called in question by Brouwer and Weyl.

Why, then, do we assent to demonstration? I do not think that it is a sufficient answer to say that its results can be checked by experience. The theories of physical science are so checked, but when an experiment casts doubt on a theory, it is not usually suggested that human reasoning is at fault, but that the physical assumptions are erroneous. Neither can the fundamental logical and mathematical intuitions be checked, confirmed or disproved by an appeal to experience. We cannot claim they are true because they work. The mental processes in dreams follow their own laws and their own 'logic' and the pragmatic test would be as likely to confirm in dreams the irrational 'logic' of dreams as in daily life the logic of daily life. Further, I think we have an intuition of a completely infinite set, and of a continuous set, which experience may perhaps suggest, but certainly cannot give. So I think that the only answer we can give is that we assent to demonstration because we do so, because it appeals to us. Its appeal is ultimate and final, not reducible to any other

basis, and not to be explained by early conditioning or in terms of the class struggle. This does not mean that it is subject to human whim, but that it is in some sense absolute. Why, then, are there differences of opinion? Because human reasoning is fallible; if there is an absolute standard, we may acknowledge it, and sometimes be in touch with it, sometimes not. If two disagree, either they misunderstand each other, or one at least is wrong. The disagreement does not show that there is more than one truth, but that truth is hard to come by.

MARXIST ETHICS.

By JOHN ANDERSON.

THAT Marxism is a *metaphysic,* a doctrine of guiding principles, a mingling of logic and ethics to the detriment of both, is shown by its conception of the advance of things to "higher" and "higher" levels, its belief in a world which, as Eastman puts it,[1] is evolving "by its own inevitable dialectic" toward something "higher", toward something "more magnificent". There is dispute as to whether Marx and Engels *intended* to dispense with philosophy and ethics in favour of their science of society, though, indeed, it is only by an implicit recognition of positive truth and positive goodness that even the term "higher" can appear to have any meaning. But it may be questioned, in the first place, whether they *can* have any logical or ethical theory, whether any instrumentalism, treating truth and goodness as alike relative, alike approximate realisations of purpose, can stand examination—if only into its own truth. No doubt, it may be called a philosophy, in that it suggests answers to certain philosophic problems, but the question is whether it can ever be stated consistently.

The nature of the guiding principles, and of the relation which social theory can be supposed to have to philosophy and ethics, is indicated by Engels in the following way. The developments in science and the social struggles of the early part of the nineteenth century, he argues,[2] "made imperative

[1] Max Eastman, *Marx, Lenin and the Science of Revolution,* pp. 87, 8. The particular references, as is indicated in the same author's *Last Stand of Dialectical Materialism* (p. 24), are to Marx's *Civil War in France* (p. 34, Postgate's edition) and to Engels's *Anti-Dühring* (p. 32, translation by Emile Burns; Moscow, 1934).

[2] *Anti-Dühring,* pp. 32, 3. Many other passages from Marx and Engels could, of course, be cited in this connection.

a new examination of all past history, and then it was seen that *all* past history was the history of class struggles, that these warring classes of society are always the product of the modes of production and exchange, in a word, of the *economic* conditions of their time; that therefore the economic structure of society always forms the real basis from which, in the last analysis, is to be explained the whole superstructure of legal and political institutions, as well as of the religious, philosophical and other conceptions of each historical period". It might be considered that this economic interpretation applies only to the genesis of philosophical and ethical theories and has no bearing on their truth, that it is not in itself a philosophical or ethical theory, or any substitute for one—though, even so, one might question the interpretation so long as "the last analysis" was not forthcoming. But Engels would permit of no such distinction; for him the truth of the conceptions precisely resides in their relation to the basis. As he says elsewhere (*Feuerbach,* Kerr edition, pp. 96-8), in discussing "the revolutionary side of Hegel's philosophy", its "great foundation thought" (of the world as made up of processes in which "there is carried out in the end a progressive development"), "has, particularly since the time of Hegel, so dominated the thoughts of the mass of men that, generally speaking, it is now hardly denied. And if one proceeds steadily in his investigations from this historic point, then a stop is put, once and for all, to the demand for final solutions and for eternal truths; one is firmly conscious of the necessary limitations of all acquired knowledge, of its hypothetical nature, *owing to the circumstances under which it has been gained*" (my italics). And he goes on to say that: "One cannot be imposed upon any longer by the inflated insubstantial antitheses of the older metaphysics of true and false, good and evil, identical and differentiated, necessary and accidental; one knows that these antitheses have only a relative significance, that that which is recognised as true now, has its concealed and later-developing false side, just as that which is recognised as false, its true side, by virtue of which it can later on

prevail as the truth; that so-called necessity is made up of the merely accidental, and that the acknowledged accidental is the form behind which necessity conceals itself and so on."

It is clear enough that Engels does not consider that this doctrine of his "has its concealed and later-developing false side", but is putting it forward as absolutely true; otherwise, anything might transpire, even the reinstatement of the "older metaphysics", in the further development of thought. But this is only an illustration of the impossibility of making anything of the "relative significance" of any antithesis or conditioned view; if it is not to remain utterly vague, if its "limitations" are to be indicated, an absolute, not a relative, statement must be made. It appears also that, on this view, there will be a confounding not merely of logic and ethics but of all theories whatsoever; they will all rank as expressions of the basis, and even if (as is not the case) there could still be distinctions of degree, it would only be degrees of expressiveness, and what was legal and what political, what religious and what philosophical, would not appear.

There is no ground, then, for Sidney Hook's distinction between the philosophies of Hegel and Marx in that while, for the former, "values were objectively grounded in the nature of things so that he could delude himself into believing that his philosophy was disinterested and free from any presuppositions", the latter "denied that any philosophy as normative inquiry could be disinterested and frankly avowed his own presuppositions and bias" (*From Hegel to Marx*, p. 26). The difference is only in the norms selected, in the things chosen as "most expressive", and, while the one choice is as arbitrary as the other, the expression is supposed to be real in either case. This becomes still clearer as Hook proceeds. "When Marx speaks of philosophy he is referring to ethical, political or social philosophy[1] and the metaphysical

[1] What should be said is that for Marx philosophy *is* social. "The modern conception of philosophy as an analysis of the fundamental categories of space, time, implication, etc.", Hook tells us, "would have been regarded by Marx, at least, as no part of philosophy proper but as

disguises in which they often masquerade. That is why he speaks of philosophical method as criticism [throughout his Critique of Hegel's *Rechtsphilosophie*]. It is a criticism which reveals the values and attitudes, the starting point and secret wishes of our thought. It is a sociology of values investigating the social roots and conditions of what human beings desire. It is not an axiology of values deducing what human beings *ought* to do from self-evident first principles. Philosophy, then, is a criticism of standpoints and methods in the light of the conditions under which they emerge and the purposes which they serve." But Hegel's *Phenomenology* is precisely a criticism of standpoints in so far as they serve the purpose of organising experience, and his *Logic* is an exposition of the various organising principles or categories as progressive representations of "the Idea". And it is as such representations also that the various institutions and conditions of society appear in his ethical and historical works. Even, therefore, if Marx's class theory is sounder socially, there is no difference on the philosophical side, no difference in "objectivity"; the difference is only in what the two force on philosophy as "higher", more expressive of reality. The common error lies in the treatment of philosophy as normative, of truth as relative, as degree of adequacy, and the doctrine of "class ideologies" is in no better case than any other relativistic theory.

What "light", we may ask, do their conditions and purposes cast on standpoints and methods? Is anything more in question than the fact that they *have* these conditions and purposes? And is this not a matter of objective truth—A

problems in the logic of science." Engels, however, in the *Anti-Dühring*, treats them as problems of the dialectic philosophy. The view that this is a "deviation" from Marx's views is cogently refuted by Eastman (*Last Stand*). But, apart from that, Hook himself says, on the very next page, that "against those who would restrict criticism to a consideration of technical philosophy, Marx argues that since *every philosophy* has its material presuppositions, a truly radical criticism must involve changing the material conditions which are at their basis" (my italics). And it is perfectly clear from Hook's account of the "Theses on Feuerbach", later in the book, that Marx is presenting his social view of philosophy, not his view of social philosophy.

brings about B, X does not bring about Y? The question is evaded by the introduction of "needs". "The new philosophy will triumph, not merely because it represents objective truth in the Pickwickian sense in which truth is relevant to ultimate questions of value, but because it fulfils the *needs* of human beings and the social conditions which generate those needs" (p. 27). In Marx's own words, "Theory becomes realised in a people only in so far as it is the realisation of its needs". This, however, does not at all affect the question of objective truth, not in a "Pickwickian" sense but in the straightforward sense of what is the case. If Marx means that a people thinks what it needs to think, still it does think that and think it true. If he means that it thinks that something is what it needs, again the question is whether that *is* what it needs. And, if the latter is the meaning, it becomes pointless to say that "Each class develops an ideology which it holds to be objectively true, and around which it seeks to rally society at large"; for there would be nothing to hinder *all* ideologies from being objectively true, though there might be something to hinder all classes from having their needs satisfied. But, if the former is the meaning, there need be no conflict between classes except a difference of opinion. It would appear that it is by a confusion of the two meanings that ideology is being substituted for truth, relativism for positive philosophy.

The philosophy of "needs" secures readiest acceptance in its ethical application, since relative theories have always prevailed in this field and positive ethics receives little recognition even now. It is not surprising that under those circumstances there is a widespread doubt whether there is such a subject as ethics. But, in Marx's case, the doubt as to whether his views permitted of ethics could too readily be extended to a doubt of the possibility of his having a philosophy, and Hook maintains that it is wrong to say that he had no place for any ethics in his philosophy of social activity. "For Marx no social life is possible without human consciousness. And there is no characteristically *human* consciousness without

ethical ideals of some kind. But Marx went on to inquire what the source of these ideals is, when, why and where they change, and what provided relative justification of any ideal in the present. . . . Against the abstract morality of Kant and Christ, Marx held that ethics represents a series of demands, not a series of demonstrations or intuitions. His ethics is a class ethics. The ethics which were opposed to it were also, he maintained, class ethics. Peel their pseudological husk away and the kernel will be found to be a concrete class need. It is inevitable that each class consider its ethical demands as absolute: it is not inevitable that it pretend that these demands are impartial or universal. Behind class rights are class needs" (p. 51).

Once more the question of objective truth is covered over in a flood of words, but Hook's verbal dexterity fails to make good the claim that Marx has an ethics. What, we may ask, can Hook possibly mean by a class "considering its ethical demands as absolute"? How does it know which are its ethical demands? Are they those which have binding force? In that case Hook is saying that a class considers that those of its demands which have binding force have binding force. There is no evidence that there is any such species of demands, or that "ideals" are different from any other object of demand; in fact, without the recognition of a *quality* of goodness, there can be no distinction between the ethical and the non-ethical.[1] But if there is such a character of things, then the question whether a certain thing is good will be a question of fact, of objective truth, no matter what anybody demands or what class he belongs to. The use of expressions like "ideals" enables Marxists, in Eastman's phrase, to "straddle the issue",

[1] Cf. Hook, p. 58: "The natural object (as distinct from thing), the esthetic object, the ethical object, the economic object are in a sense *objectifications* of human purpose." Not only can Hook not show how, for Marx, these types of object can be distinguished, but he quite fails to show, as against Eastman, that Marx distinguishes the natural object from the thing. In the second Thesis on Feuerbach (Hook, p. 281), Marx says: "The question whether human thought can achieve objective truth is not a question of theory but a *practical* question." This would not be so if the thing were different from the "natural object" (what we use).

to adhere to their relativism while at the same time *suggesting* a positive quality which ethical objects have.

It is to be understood that the "abstract ethics", to which exception is taken, is of a relativist character, and that Marxism rightly draws attention to the weakness of the attempt to erect "absolutes" of duty or interest, to specify what is "absolutely commanded" or "absolutely desirable". But, because of the relativism in Marxism itself, the exposure can never be thorough, and we find not only fundamental ambiguities, but traces of the very doctrines that have been rejected, running right through Marxist discussions of ethics. The issues are particularly well illustrated in a passage in the *Anti-Dühring* (pp. 108, 9),[1] in which the doctrine of eternal moral truths is attacked. "The conceptions of good and bad", says Engels, "have varied so much from nation to nation and from age to age that they have often been in direct contradiction to each other. But all the same, someone may object, good is not bad and bad is not good; if good is confused with bad, there is an end to all morality, and everyone can do or leave undone whatever he cares. This is also, stripped of his oracular phrases, Herr Dühring's opinion. But the matter cannot be so simply disposed of. If it was such an easy business there would certainly be no dispute at all over good and bad; everyone would know what was good and what was bad." And, having shown that this is not so by pointing to the three types of moral theory held by "the three classes of modern society, the feudal aristocracy, the bourgeoisie and the proletariat", Engels triumphantly concludes that "men, consciously or unconsciously, derive their moral ideas in the last resort from the practical relations on which their class position is based—from the economic relations in which they carry on production and exchange"; and, while none of the class moralities has "absolute validity", the proletarian is awarded the palm as that which "contains the maximum of durable elements" and so "represents the future".

[1] I discussed the passage briefly in my article, *Marxist Philosophy*; this Journal, March, 1935. The reference there was to the Kerr edition, entitled *Landmarks of Scientific Socialism* (translation by Austin Lewis).

It is, of course, a piece of effrontery on Engels's part to suggest that the drawing of an absolute distinction between good and bad implies that it is "easy" to determine what is good and what is bad. Men distinguished absolutely between flat and round, but did not find it easy to establish the roundness of the earth. It was, however, just because they made a definite, and not a relative, distinction, that they were able to dispute about the earth's shape. But Engels seems to imply that the fact that men disagree about goodness means that they are talking about different things, that their class position (or, more generally, their economic position) determines not merely what they consider to be good but what they mean by good. On this view, all the "theories" would be on different subjects, and there would be no reason for calling them all "moral" theories. But, in that case also, there would be no reason why they should not all be eternally true, even if they are not eternally believed—why X should not always be what the bourgeoisie means by "good" (whatever that may be) and Y always be what the proletariat means by "good". If, however, the theories are on the same subject—so that there really are disagreements—if it is merely that economic relations lead men to attach the definite predicate, good, to different subjects, then, as was noted above, this account of the genesis of ethical beliefs does not affect the question of ethical truths at all (and cannot, incidentally, determine whether they are or are not "eternal"). It can never be *evidence* for the proposition "Y is good" to say "I believe it is, because I am a proletarian"—or, again, to say that people are going to believe it in the future. But, even if it were, it would be evidence for an ethical fact.

Engels's "straddling of the issue", then, seems to take the form of arguing that there are ethical theories but no ethical facts. We can come closer to the crux of the matter by considering the contention attributed to an objector that, if good is confused with bad, everyone can do as he pleases. This has force only if by "good" is meant what is to be done and by "bad" what is not to be done; otherwise, even

if good and bad were qualitatively distinguished, a person might do what he pleased, and, if they were not, he might regulate his conduct by some other distinction. Now, no one will deny that policies, demands, "needs", vary with conditions of life—and it might readily be admitted that there are no eternal needs. That this is Engels's own line of argument is shown by the example he proceeds to give, that the moral law, "Thou shalt not steal", must exist in all societies in which there is private property, but that "in a society in which the motive for stealing has been done away with . . . . the teacher of morals would be laughed at who tried solemnly to proclaim the eternal truth: Thou shalt not steal!" In other words, the assertion that stealing is bad is a form of exhortation, and, where there is no need to steal, there is no need to exhort people not to steal. But what is "moral" about all this, what distinguishes moral "needs" from other needs, moral "truths" from other truths? The fact is that the term "need" covertly conveys the suggestion of living *better,* that, along with the amalgamation of logic and ethics (and the sciences generally), goes an attempt to get the advantages of the independent recognition of positive goodness.

This is made still clearer as Engels proceeds. Rejecting the "dogma" of an eternal moral law, while himself maintaining the dogma of a "last analysis" according to which moral theories are the product of the economic stage of society, he says: "And as society has hitherto moved in class antagonisms, morality was always a class morality; it has either justified the domination and the interests of the ruling class, or, as soon as the oppressed class has become powerful enough, it has represented the revolt against this domination and the future interests of the oppressed. *That in this process there has on the whole been progress in morality, as in all other branches of human knowledge, cannot be doubted.* But we have not yet passed beyond class morality. *A really human morality* which transcends class antagonisms and their legacies in thought becomes possible only at a stage of society

which has not only overcome class contradictions but has even forgotten them in practical life" (my italics). What, on a relative theory, can be meant by "progress in morality"? Does it mean a change in approvals which can itself be approved, the emergence of more demandable demands, more necessary needs? And is there not implied here an absolute necessity by which relative necessities are to be measured? This is, in fact, the position; those needs have greatest force which come nearest to "historic necessity". Progress consists in advance towards a postulated Absolute, reality's, or, on the Marxist theory, Society's, realisation of itself, the establishment of *true society* (Socialism), of the true condition of humanity. "Scientific Socialism" reveals itself as Hegelian metaphysics, with the substitution of Society for the Idea. But since, short of the attainment of the Absolute, we are left with the merely comparative, with degrees of adequacy, it must always be purely arbitrary to say whether and what progress has been made. The recognition of progress, in fact, depends on an implicit admission of a positive goodness which runs counter to the whole theory of "needs" or any other moral relativism.

The Marxists, however, do not see the ambiguity of their position, but remain committed to an unscientific ethics of an evolutionist and rationalist character. The confusions of evolutionary ethics have been forcibly demonstrated by Moore, who shows, in *Principia Ethica,* that its supporters not merely hold both that "better" simply means "more evolved" (or *later*) and that evolution is producing something better, but actually take the former as a *reason* for holding the latter. But what makes it particularly hard for the Marxists to see these confusions is the complicating factor of their Hegelian rationalism, of their taking the later as nearer to the true or rational conditions of affairs.[1] This is the "scientific" basis of their optimism. From a scientific standpoint, says Engels

[1] Cf. Marx, *Capital* (Moore and Aveling translation; Glaisher, 1918, p. 51): "The religious reflex of the real world can, in any case, only then finally vanish, when the practical relations of everyday life offer to man none but *perfectly intelligible and reasonable relations* with regard to his fellowmen and to nature" (my italics).

(*Anti-Dühring,* p. 170), the "appeal to morality and justice does not help us an inch further; to economic science, moral indignation, however justifiable, cannot serve as an argument, but only as a symptom. The task of economic science is rather to show the social abuses[1] which are now developing as necessary consequences of the existing mode of production, but at the same time also as the indications of its imminent dissolution; and to reveal, within the already dissolving economic form of motion, the elements of the future new organisation of production and exchange which will put an end to those abuses." Or again, as Kautsky has it (*Ethics and the Materialist Conception of History;* Kerr edition, p. 201): "It was the materialist conception of history which has first completely deposed the moral ideal as the directing factor of social evolution, and has taught us to deduce our social aims solely from the knowledge of the material foundations." And he goes on to speak (p. 206) of the "splendid vistas", of peace, freedom and industry, which "are won from sober economic considerations and not from intoxication through the moral ideals of freedom, equality and fraternity, justice, humanity!"

The process of "deducing" social aims from economic facts is a highly mysterious one. The recognition of a cause, of a necessary and sufficient condition of the occurrence of a phenomenon in a certain field, of what *differentiates* its occurrence from its non-occurrence, is equally relevant to the aim of bringing about the phenomenon and to that of preventing it. The assumption is, in fact, that the "material foundations" have their own aims, that they have the "task" of overcoming their own evils. It is because of this assumption that the Marxists treat popular moral notions as merely epiphenomenal, while at the same time they do not rise above the level of such popular notions (ideals, indignation, altruism —as in Kautsky's equating of "the moral law" with "the social impulse"). They have no conception of the specific field of ethical science (or of any other specific field) because of their

[1] wrongs (Lewis); evils (Eastman).

devotion to an ethico-logic, because, for them, facts of any description are facts of *advance*.[1]

This ethico-logic, this metaphysic or rationalism, is nowhere more evident than in Marx's "Theses on Feuerbach". The first thesis practically sums up the whole position. "The chief defect of all previous materialism—including Feuerbach's —is that the object, reality, sensibility, is conceived only in the form of the object or as conception, but not as human sensory activity, practice [*Praxis*], not subjectively. That is why it happened that the *active* side [of the object], in opposition to materialism, was developed by idealism—but only abstractly, for idealism, naturally, does not know real, sensory activity as such. Feuerbach wants to recognise sensory objects which are really differentiated from objects of thought, but he does not conceive human activity itself as an objective activity. Consequently in the *Essence of Christianity,* he regards only the theoretical attitude as the truly human one, while practice is conceived and fixed only in its dirty-Jewish[2]

[1] Cf. Eastman (*Marx, Lenin*, p. 87): "It is easy to scorn your own ideals, treating them as mere signs of a crisis in the evolution of material forces, when you have already confided the attainment of your ideals to those material forces." Again (*Last Stand*, p. 13): "If you do not read your purpose to change the world into the world itself, you cannot be at the same time realistic and purposive. You cannot be a 'materialist' and strive toward an ideal unless you conceive matter itself as striving toward your ideal." And (in comment on Hook's contention that "The purpose of Marx's intellectual activity was the overthrow of the existing order"), "you couldn't overthrow a fence-post, could you . . . . without knowing something . . . . that the man who was trying to stop you would want to know too? It is the need to eliminate the alternative, to make sure of the victory of your effort—a need dictated, remember, by the nature of animistic thinking, not by the nature of revolutionary men—that gives rise to this whole prodigious effort to keep up the bluff that Marxian economics in so far as it is any good is not straight science" (*Last Stand*, p. 30)—i.e., concerned with fact, not "purpose".

[2] commercial, "profit and loss"; practice as getting on, making money. The expression troubles Hook, who solemnly remarks (p. 278) that, although Marx was free of anti-Semitic prejudice (!), "he unfortunately was not over-sensitive to using the term 'Jew', often with unsavoury adjectives, as an epithet of abuse". Marx, of all men, was surely aware that money-grubbing is not a peculiarly Jewish trait. But the point is that it is a popular accusation, a means whereby people cover up their own commercialism. (Cf. *Ulysses*, p. 34: "A merchant, Stephen said, is one who buys cheap and sells dear, jew or gentile, is he not?")

form. Hence he does not grasp the significance of 'revolutionary', of practical, critical, activity" (Hook, pp. 273, 4).

The phrase rendered by Hook as "in the form of the object or as conception" is given by Eastman (*Last Stand*, p. 8) as "under the form of object or of contemplation", which certainly seems to make better sense. The point is, in any case, that the older materialists conceived reality (which, of course, for them is *material* reality) as an "-ed", while the theory of the "-ing" was developed by idealism as an account of the activity of *spiritual* reality (Hook's interpolated phrase "of the object" showing that he misses this point). Thus, while the idealist theory can only be "abstract" because reality after all *is* material, what materialists have to do is to recognise the "-ing", the activity, in material reality itself. And this is done by identifying sensory activity with the sensible object, by identifying the object with practice, and, in fact, with *revolutionary* activity. The sensory world has to be taken, Marx says, as a historical product. "Even the objects of the simplest 'sensory certainty' are given through social development, industry and commercial relations. The cherry tree like almost all fruit trees was transplanted to our zone, as is well known, through *commerce*; it was only *by virtue of* this action of a determinate society at a determinate time that it was given to 'the sensory certainty' of Feuerbach" (quoted by Hook, p. 295, from *The German Ideology*). The relativism of this, the confusion of what a thing is with what it is "through", need not be stressed. What is important is that the truth of anything is taken as its place in the development of reality towards "rationality", towards the realisation of its true nature.

This is confirmed by the tenth and eleventh theses (Hook, pp. 300, 303). "The standpoint of the old materialism is 'civic society'; the standpoint of the new materialism is *human* society or socialised humanity." "Philosophers have only *interpreted* the world differently: the point is, however, to *change* it." Reality is revolution, and revolution is the achievement of a rational state of affairs—of Socialism. It is extra-

ordinary that Hook should occupy space in wondering whether Marx was a "true Socialist"; he might easily differ from the school so described in his estimate of what *was* the truly human or rational condition of things, the choice being quite arbitrary in any case, but the logical position is the same. It may be said, also, that Marx differs from Hegel in that, while the Hegelian Absolute is a "result" which is never arrived at, Socialism is taken to be realisable *in time*. Marx would, in fact, be more consistent if he regarded history as a progressive socialising of things, without any suggestion of reaching Socialism or "perfectly reasonable relations"; his positive views of society collide here with his metaphysics. Hook takes a more Hegelian line in giving (pp. 306, 7) what he considers to be the sense of the final (eleventh) thesis: "The very fact that philosophy is an activity in a world of space, time and incompatible interests, makes it clear that its goals cannot be absolute truth or absolute justice. But the fact that action is thoughtful makes it possible to achieve beliefs which are *truer*; the fact that thought leads to action makes it possible to achieve a world which is *more just*." Here we have comparativism *in excelsis*, with no possibility of showing what beliefs are (truly) truer. But the real outcome of the theses is that not only would Marx not distinguish "truer" from "more just", but that he could not distinguish either of them from *later*.

It is worthy of note that, in spite of Marx's rejection of the individualistic outlook of "contemplative materialism" (ninth thesis), a rejection which Hook (p. 303) expresses by saying that his "conception of man pointed to the necessity (!) of a direct collective control of all social institutions which influenced man", his own outlook is distinctly individualistic in character. This is, indeed, only another example of his Hegelianism, for while Hegel's most useful work may be said to lie in his rejection of social atomism and his recognition of institutions, his philosophy remains a philosophy of *consciousness*, and in this too Marx followed him, identifying the rationalising of things with their "coming to consciousness".

The very fact that *man* is chosen as the subject of history is indicative of individualism. "History does nothing; it 'possesses no colossal riches'; it 'fights no fight'. It is rather man—real, living man—who acts, possesses and fights in everything. It is by no means 'History' which uses man as a means to carry out its ends as if it were a person apart; rather History is nothing but the activity of man in pursuit of his ends" (quoted by Hook, p. 38, from *The Holy Family*). This is the language of individualistic utilitarianism. One would expect a materialist theory, even in the form of a theory of men and not of institutions, to take its departure from what men do, not what they think or seek, but the Marxists can never get away from their talk of wills, ends, needs.

Thus Engels (*Feuerbach,* p. 105) says: "Men make their own history in that each follows his own desired ends independent of results, and the results of these many wills acting in different directions and their manifold effects upon the world constitute history. It depends, therefore, upon what the great majority of individuals intend"—which is still individualism, just as in the case of Hook's "collective control". Going on, then, to inquire into the "impelling forces" behind historical change, Engels remarks (p. 108) that "we cannot consider so much the motives of single individuals, however pre-eminent, as those which set in motion great masses, entire nations, and again, whole classes of people in each nation". And these forces, it need hardly be said, are found (p. 114) in "the economic conditions of the life of society", the prime function of which is "the production of the necessities of existence"—i.e., of the existence of *men,* not of organisations.[1] It is a remarkable fact that when, as by Kautsky, the materialist conception of history is taken as applying Darwinian principles to society, the question is

[1] Cf. Engels, *Socialism, Utopian and Scientific*; opening of § III (Aveling's translation). "The materialist conception of history starts from the proposition that the production *of the means to support human life* and, next to production, the exchange of things produced, is the basis of all social structure." The phrase I have italicised does not appear in Burns's translation of the corresponding passage in the *Anti-Dühring* (p. 300).

always of the survival or otherwise of persons, of the needs of "life"; and even the *class* struggle is taken as the struggle for existence of the persons composing the classes, and not of rival forms of activity, which might occur in the same person, and the survival or non-survival of which is, in any case, quite a different matter from the survival or non-survival of persons. Any of the elements in culture—Science, Art, Industry itself—no doubt operates through persons, but its "needs", in the sense of conditions necessary for its continuance, its "ends", as the effects its continuance will produce on its surroundings, its interactions generally with other things so that it does or does not "survive", are not dependent on anyone's knowledge of them—any more than, as Marx points out (Preface to *Critique of Political Economy*), a man's own history is dependent on what he thinks of himself. It will not be denied that Marx gives some account of this social struggle, that his doctrine has helped towards a positive theory of organisations; but his humanistic starting-point has prevented the working out, by orthodox Marxists at least, of such a truly materialist conception of history.

It may be said, however, that it is not so much the individualism of this position as its rationalism, the conception of a *true* state or outcome of things, with the connected conception of reality, society, humanity, advancing *as a whole,* that prevents the working out of a necessarily pluralistic theory of the struggle of organisations. This total movement Marx attempts to account for in terms of the Hegelian "negation of negation". Thus he says in *The Holy Family* (quoted by F. Mehring, *Karl Marx: The Story of His Life*; English translation, p. 103): "Because the abstraction of all humanity, even the appearance of humanity, is practically complete in the fully developed proletariat, because the living conditions of the proletariat represent the focal point of all inhuman conditions in contemporary society, because the human being is lost in the proletariat, but has won a theoretical consciousness of loss and is compelled by unavoidable and absolutely compulsory need—the practical expression

of necessity—to revolt against this inhumanity, the proletariat can and must emancipate itself. However, it cannot emancipate itself without abolishing the conditions which give it life, and it cannot abolish these conditions without abolishing all those inhuman conditions of social life which are summed up in its own situation." Such rhetorical playing with the notions "human" and "inhuman" (and, according to Eastman, apart from empty rhetoric of this kind, no proof is given anywhere in *Capital* of the "necessity" of Socialism) is a poor substitute for an account of the interactions of social movements, proletarian and otherwise, and an estimate of their outcome in positive terms.

It is somewhat surprising that Marx should immediately go on to say: "It is not a question of what this or that proletarian, or even the proletariat as a whole, may imagine for the moment to be the aim. *It is a question of what the proletariat actually is* and what it will be compelled to do historically as a result of this being. The aim and the historical action of the proletariat are laid down in advance, irrevocably and obviously, in its own situation in life, and in the whole organisation of contemporary bourgeois society" (my italics). No doubt there is much here of the sort that has been criticised. But if Marx could have stuck to the view that what a thing is is prior to its aims, it would have meant a complete recasting of Socialist theory. The doctrine of the primacy of "needs", of history as "man's" pursuit of his "ends", would have had to be abandoned; it would have been seen that needs are the needs of already existing activities (viz., what is required to keep them going), that things (human beings or social institutions) have their own ways of working even if they have *no* ends, though, of course, they will always have effects, and that the working-class movement exists positively as a form of activity now, and not relatively as a movement "for" Socialism, and would retain its good features (assuming that it has these) even if Socialism never came about at all. That is not to say that it is inherently impossible, from a knowledge of this and other movements,

to predict that Socialism, a society of producers without capitalist property, will come about, but only that it will come about, if at all, from the nature of the movements and not of their "aims", and that absence of proof (or even disproof) of its coming about would not nullify the movements.[1]

The upholding of a utilitarian ethics, an ethics of "ends", has prevented Marxists generally from appreciating the work of Georges Sorel, who, admittedly on a Marxist basis but with a deliberate avoidance of Marxist orthodoxy, has developed an "ethics of the producers". Sorel agrees with Marx that the development of the working-class movement has resulted from the bringing together of the workers in the capitalist factory. But the "heroic values" there engendered are directly opposed to the "consumers' ethics" of the capitalists, the ethics of profit or return, and thus to the tedious preaching of class "interests" and to the theory and practice of "social engineering". Developing the "values" of initiative, emulation, care for exactitude and rejection of the notion of "reward", the factory worker becomes assimilated to the scientist, the artist, the warrior—the types of *disinterested* activity. Sorel rejects the philanthropic "ethics" of Christianity precisely because it is concerned with returns and has no conception of a system of *production,* and a system of rights connected therewith. This is in line with the criticism of the philanthropic Utopians, in *The Communist Manifesto,* because they conceive history as the carrying out of their social plans and the working class

[1] Eastman, with his theory of what is "possible" but not "necessary", and his connected conception of "social engineering", considers it a merit on Lenin's part, a sign of his being "a scientist and not a priest", that he ignored the appeal of the more orthodox Plekhanov to what, on Marx's view, the proletariat itself "is historically bound to accomplish", and persisted in his doctrine of the bringing of "socialist consciousness" to the working-class movement *from without* by a body of professional revolutionists (cf. *Marx, Lenin,* Part II, ch. IV). Eastman has recently written (*Harper's Magazine,* February, 1937) of "The End of Socialism in Russia". But what he presumably does not see is that the present degradation of Russia is the *outcome* of "social engineering", of "applying" theory to social movements so as to make them go right, of the fact that those who "brought Socialism" to the working-class movement which they presumed to treat as their material, were *not* part of the movement or, more generally, were not producers—not scientists but metaphysicians; as he himself is, in being a voluntarist, a dealer in "possibilities".

only as the most suffering class. But we have seen how near Marx himself came, in *The Holy Family,* to the latter conception and how deeply utilitarianism is embedded in his whole work. And the latter-day Marxists, of the Leninist school, are little enough concerned with craftsmanship or "care for exactitude"; they regard exactitude (combined, of course, with "flexibility") as residing solely in their own dialectical "science", while the masses are moved to revolution not by productive traditions but by desperation ("increasing misery").

It may be noticed that the "values" of the productive movement appear as attitudes of the individual producer. It is to be understood that participation in a movement will affect the character of the participants, but this does not mean that the movement can be summed up in, or expressed as a resultant of, their attitudes. On the contrary, any serious study of society must recognise the way in which individuals are "caught up" in movements, the extraordinary extent to which social developments can raise or lower individual "potential"—including the capacity for thinking and the making of decisions. This is, it may be said, not markedly different from the above-quoted views of Engels. But the point is that it can be developed only by abandoning the doctrine of "ends", whether of individuals or of movements. And, with whatever Bergsonian confusions Sorel may express his departure from such rationalistic doctrines, his main concern is with movements as they are in themselves.

As a result of a preliminary investigation of the three highest achievements of the mind (science, religion, art), he says, "we are led to believe that it is possible to distinguish in every complex body of knowledge a clear and an obscure region, and to say that the latter is perhaps the more important. The mistake made by superficial people consists in the statement that this second part must disappear with the progress of enlightenment, and that eventually everything will be explained rationally in terms of the *little science*" (*Reflections on Violence*; Hulme's translation, p. 159)—a view which, as we have seen, would convict Marx of "superficiality"

in certain parts of his doctrine, at least. And Sorel goes on to distinguish, in ethics, the clearly expressible part "which has reference to the equitable relations between men" from the obscure part "which has reference to sexual relationships", in legislation, the "scientific" region of contracts from the "mysterious" region of the family, and, in economics, the simplicity of questions of exchange from the complexity presented by the facts of production. ("Ethics", in the first distinction here, is used in the sense of custom.) "Nobody denies", he adds, "that production is the fundamental part of any economic system; this is a truth which plays a great part in Marxism, and which has been acknowledged even by authors who have been unable to understand its importance."

In fact, the "irrational", as opposed to the "rational" or calculable, is what things are, which must be prior to their adjustments. The "consumers'" view, that production is "for the sake of" consumption, cannot account for the development of production itself. The common ethical notions of disinterestedness and of things which are "for their own sake" are approaches to the conception of the independence of production, whether scientific, artistic or industrial. The truth of the "economic interpretation" is that society *is* production and that consumption is only incidental to its history. And, in general, a doctrine of what things are "for" is idealism, not materialism. The science of ethics, in particular, deals with what goods are, and the view that they are productive activities, while it owes much to Marx, could not have been developed without a shedding of Marx's rationalism and an independent reference to production itself. A full account of Sorel's ethics would require a separate study, in which consideration would have to be given to what he owed to Proudhon and to the French syndicalist movement, as well as to Marx. Enough has been said here, perhaps, to show that Sorel has not only helped to detach Marx's positive contributions to social science from his metaphysic of "true society" (whereas the orthodox Marxists remain in hopeless entanglement), but has opened up the science of ethics itself.

THE SOCIOLOGICAL OUTLOOK OF VIERKANDT.

By Dora Peyser.

The word Sociology is used to-day as a collective term for all sorts of studies. The most divergent definitions have been given of it. Many people talk of Sociology and mean very different things. Looking at books, journals, institutes, societies labelled "sociological", it is very difficult to find out what is the unifying bond. Among scholars there is the usual quarrel, each one calling only his own system or conception Sociology, denying to others the right to use the same name; and, to make things worse, colleagues working in neighbouring fields such as Philosophy, Psychology, Economics, will not acknowledge the fact that there is a place for the new subject, that there is a Sociology.

All studies called rightly or wrongly "sociological" deal in some way with human groups, their physical and mental qualities, their achievements, especially in culture and civilisation. For this reason Sociology is in danger of being regarded as an Encyclopædia of Social Science.

It is common to trace Sociology back to Comte, who has coined the name, to call him the "Father of Sociology", and then to follow up the line of his successors. Name-giving marks a very important point in the development of that which is named, but the christening is much later than the birthday. If we want to find the beginnings of Sociology we will have to go back to Aristotle. He was the first to see in a realistic way society as a phenomenon and a problem. His famous descriptions of man as "zoon politikon" and of the relationship between the group and its members have not yet been surpassed by modern thought. Sociology has its origin in Philosophy and is still part of it.

The social philosophical thinking of the past, with its various conceptions of and speculations about social life, represents, so to speak, a preliminary stage in Sociology. It shows how during the different periods philosophers have seen society and have formed social ideals out of the norms and ideas of their time and civilisation. The mediæval thinkers belong to this group, and so do many other interesting personalities of later centuries, such as Macchiavelli, Thomas More, Bodin, Grotius, Hobbes and Locke. The ideas of such men have stimulated action, though not always so directly as those of Rousseau, who hammered out the Ideology of Democracy. In the centre of interest stood political theory, questions of government, of constitution, and so on. But the social and industrial revolution of the 18th and 19th century drew attention to the social process itself. Society underwent fundamental changes. Completely new situations and problems arose. Out of the desire to understand one's own surroundings, Sociology proper developed, first with Comte in France and then with Spencer in England.

In Germany, sociological thinking moved for a longer time in the broad stream of Philosophy. German Idealism and Romanticism, Philosophy of History and Law, stood godfathers to Sociology. Hegel and his antithetic disciple Marx offered an analysis of their own society in its historical process. Lorenz von Stein interpreted the social and socialistic movements and ideas in France for Germans and Austrians. Riehl, stimulated by the Romantic School, laid the foundation of a "Volkskunde", which is very characteristic of German thinking. It is a sociological interpretation of national culture and its expression in language and dialect, song, dance, folk-lore, national dress, social traditions, architecture, arts and crafts. The national group is individualised. This aspect of Sociology, which is something like a modern Ethnology, has always held the interest of Germans. It deepens into the Philosophy of History. From Herder, Fichte and the Romantic thinkers a direct line leads to Riehl, and from there to those modern Sociologists who regard "Voelker" as the true social

units. (There is no English word for "Volk", and its meaning is difficult to define. One can perhaps say: Volk is a group integrated by a national culture, without taking the political organisation into account.)

In the attempt to develop Sociology as an independent science, almost every other science has served as a pattern, at one time or another: Biology and other natural sciences, Psychology, History, Anthropology and many others. Sociology has been understood as Social Mechanics, as Anthropological Sociology, Geographical Sociology, Biological Sociology, Psychological Sociology, and as Social History. As a logical result, Sorokin called one school "Sociological Sociology".[1]

The reason for this trouble is that the subject-matter of Sociology, namely society, is also dealt with by other sciences. Many of them are indeed closely related, especially Political Theory, Social History, Anthropology, Psychology, Philosophy of History and Law, and Ethics. Before it finds its own methods, a young science is inclined to use those of others. Sociology still has to find itself.

In the stratification of life, Sociology is concerned with a particular stratum, not clearly distinguished from the other layers; it is the sphere of the "being together" of men, of social relations, groups, society. In the endeavour to develop a genuine Sociology the interest in the content and meaning of the actual social process leads easily into political theory and speculation. Or the fear of plunging too deeply into time-bound arguments swings the pendulum to the other extreme, a mere description and formal classification of relationships. It must be emphasised again that Sociology is part of Philosophy. To cut it off from Philosophy is fatal, because then Sociology develops into a kind of social behaviourism, a technique, perhaps even a pseudo-science. Yet the description of social life and social facts has its place. It is Sociography, an instrument of social research, and, if well done, such a collection of material is very valuable. But it is not Sociology.

[1] Hans Freyer, *Einleitung in die Soziologie*. Quelle & Meyer, Leipzig, 1931.

Dr. Alfred Vierkandt, Professor Emeritus of the Berlin University, is one of the successful explorers of the true field of Sociology and a great teacher of the scientific methods adequate to the subject-matter. To understand his work, one must know something of his interests, of the influences which have worked on him, and the way he used them to achieve his own sociological ends.

There is first of all his interest in Anthropology. The primitive society taught him to understand society generally and provided him with material for many fine analyses of social processes. It is significant that Vierkandt's lecture course on "Psychology of aborigines" was *his* way of introducing students to sociological thinking and understanding. The work of his friend and colleague at the Berlin University, Professor Richard Thurnwald, and of other Anthropologists was a permanent source of material for his sociological studies.

A path to the understanding of modern society was cut by Ferdinand Toennies, the ingenious German Sociologist, whose classic differentiation between "Gemeinschaft" and "Gesellschaft" (primary and secondary group, integral community and society) has become an essential part in sociological theory and argument. Vierkandt has developed this theory further, and, handling it in a creative and independent way, has achieved a more adequate interpretation of social reality.

As a true German Sociologist, Vierkandt is a Philosopher and draws freely from general Philosophy. For him there are no partition-walls between Philosophy and Sociology, and Sociology is simply the Philosophy of social life. Kant and Hegel play an important part in Vierkandt's sociological studies. Ideas like Hegel's conception of a "buergerliche Gesellschaft" (civic society), the problem of the objective spirit, the theory of punishment, the philosophy of law generally, all these and more are fundamental for the understanding of social life and social process. Vierkandt always follows up the recent developments in Philosophy. He welcomes

any new light on social phenomena, be it in Ethics, in Gestalt-psychology, in "Kulturphilosophie", in social research or social-historical investigations.

That Sociology is a Philosophy may be illustrated also from the methodological angle. Suppose we have two groups of people, both alike in number of persons, their age, sex, environment, etc. Quantitative methods, the instruments of exact science, cannot teach us much about the actual difference between the groups. We have to ask such questions as the following: What kind of solidarity exists in these groups? Are the groups strong or weak? How is the authority organised; how is the power distributed? What is the specific character of the group order? What is their attitude towards other groups? The proper method for investigations of this character is Phenomenology, the only method which, according to Vierkandt, can achieve success in Sociology.

The phenomenological analysis endeavours to understand the phenomenon from within. It is neither empirical induction, using more or less accidental material, nor deduction from abstract principles, but contemplation of a single case or a few cases, inference from the essence of the phenomenon. It is "ideierende Abstraktion". It deals with ultimate notions. One cannot go behind ultimate things, they cannot be explained. One either sees them or is blind to them. They are found by intuition.

Intuition, as a philosophical method, involves the danger of abuse. Speculation and subjectivity easily creep in. It seems, therefore, the safer way to use induction and, by means of statistics, comparing as many cases as possible, to declare the average as the normal, the typical. But what is typical in the sphere of social life is not found by mathematics. Sometimes one single case is more revealing than a hundred. A type must be seen, recognised and understood. Vierkandt is no historian describing concrete individual groups, he uses "Ideal Types", as has often been done since Max Weber laid the foundation of this method.

Group life is full of "meaning", and so is human life generally, as soon as it emerges from the physical sphere. Meaning, however, is a symptom of the actuality of values. Values must be felt, and group life must be understood. There are no other adequate methods.

A broad-minded, sensitive and unbiased personality is the indispensable condition for the use of the phenomenological method. The true philisopher sticks to the phenomenon. He must be able to stand in the "apory" without jumping prematurely to unjustified conclusions. He alone propounds antinomies without the comfort of cheap solutions and explanations. Vierkandt is such a philosopher.

Not only positive, but also negative influences form a scholar. Throughout his work Vierkandt fights against two principles which dominate the field of Sociology and, as Vierkandt sees it, modern society itself, and which he regards as detrimental. They are Rationalism and Individualism.

A Rationalist falls short of the full understanding of social phenomena. He is, as it were, colour-blind. His power of recognition is restricted to concrete and logical subjects. But the irrational factors are strong in the social sphere of life, and in the maintenance of group life subintelligent forces, subconscious expression, wordless speech, etc., play an important rôle. We are only just beginning to realise their significance.

Individualism is in a certain way Rationalism too. From an individualistic point of view, the individual, as a biological entity, is the ultimate unit, and a group is a combination of individuals. A rationalistic and individualistic conception of society will always remain piecemeal because it is unable to catch sight of the fundamental group forces.

There are two opposite approaches to the understanding of group life: Individualism and Universalism. The first leads necessarily to Social Psychology and stops there. The other leads up to phantastic ideas, using for preference analogies and words for that which it does not know but wants to name. To this type belong ideas of a group mind, analogous

to a personal mind, the myth of a group substance, the Organism Theory, and similar speculations. Vierkandt, in his unbiased, realistic and direct analyses of the phenomena, admits that both the individualistic and the universalistic approach strive to describe something that is actually existent, but considers that they are one-sided and carried to the extreme, missing essential segments of the very complex whole.

For Vierkandt, Sociology deals with social forms, facts and phenomena which are found in all societies throughout the ages. His aim is a Systematic Sociology.[1] His work has been classified under Psychological Sociology. This is not quite correct. It is true that he deals with all aspects of Social Psychology, but only because it is a necessary stepping stone for the understanding of social life, and because not sufficient work along these lines has been done in Germany to which he can refer his students or readers.

Sociology, dealing with men, has naturally to do with psychological facts and processes. Vierkandt regards Social Psychology as auxiliary to Sociology. He would never mix Psychology and Sociology, nor allow that Social Psychology took the place of Sociology.

Social Psychology describes the social instincts and tendencies of men. From the individual they stretch out, not into some empty space, but towards other individuals. What meaning, for instance, has Protective Instinct when there is nobody who might need protection? Self-Assertion and Self-Abasement can only exist when there is comparison with others. Supposing one person has the will to power, the others must correspond in their attitude, be their submission based on fear, or on reverence, or admiration. Or if two persons strive for the same kind of power, and neither will submit, there will be competition, or rivalry, or open fight. Again, what else are Suggestion and Imitation but processes going on between people? Then there is Sympathy. Who can count the thousand ways in which Sympathy can express itself? But it

[1] See Alfred Vierkandt, *Gesellschaftslehre*, Second Edition. Ferdinand Enke, Stuttgart, 1928.

will never stay completely within the person, but will at least strive for expression and response.

The mere fact of two individuals being related is already a sociological matter. Relationships between men have their own specific character, form and meaning. The relationship is not identical with the psychological process going on in the people concerned. It is an object, a thing in itself. Take as example the case of two people loving each other. There is love between them. Both partners feel it, but already being man and woman, they feel it differently and behave differently, and the form this love takes, the courting, the letter writing, perhaps the proposal, engagement, marriage, all this is distinct from the emotions of the two partners concerned. A social relationship is something more than a process within the individuals.

There is another conception against which Vierkandt takes a stand. He thinks it one of the gravest mistakes in Sociology to ascribe to man one and the same identical nature, and to explain group life by gregarious uniform reaction. Every organisation is based on some kind of differentiation. Group life would not be possible, could not take any shape or form, if people were not different from each other. This statement is of special interest because Vierkandt is certainly not in any danger of being regarded as an Individualist. To recognise that people are different does not mean the approval of Individualism as a state of society. Only because of the variations of human nature in the individuals can the "being together" of persons merge into a social form.

When do people by being related become a group? Just as children try in vain to find out the moment at which they go to sleep, the hiatus between person and group, though existing, has not yet become visible. What we know is that the social tendencies, belonging to the innate equipment of men, play into each other in such a way that they create a higher synthesis, the group as a whole, the group individuality. The group cannot be explained completely by a knowledge of the individuals. It is the miracle of a creative synthesis.

Society is founded on individuals, the existence of persons is a supposition of society, but a foundation is not the building, and society itself is super-individual and impersonal.

The social universe is no mere abstraction. It is neither only in the imagination, nor is it concrete in a physical sense. It is reality of a special kind. This reveals itself very clearly in the phenomenon of the group's "Urge to Live". Everything that once has come to life, strives to maintain itself and to grow. The individual's will to live is a well-known fact. But all the individuals' wills to live, taken together, do not result in a group's will to live. On the contrary, the group's life is often won by the self-sacrifice of its members, and it may mean the death of a group when the members try to save their own lives. The group is stronger than the individual, and when persons give their lives for a common cause, they feel themselves absorbed in the immortality of their group.

The group's urge to live has not always to pass this last test of human life and death. Even small, unimportant social units have a tendency to continue existence and resist dissolution. How many organisations, associations, clubs go on when they are no longer needed, because they do not know how to die.

Most groups are not satisfied with simply maintaining life, but want to grow, to expand, to develop according to their special character. A club wants more members, an institution more inmates and buildings, a university more chairs and departments, a shipping company more and bigger ships; these are among the forms that the trend to expand may take, and where it is missing there is weakness or decay. For families and nations propagation is important. No rationalistic argument can contradict the fact that childlessness is a spot on the family pride. When even densely populated countries complain of the falling of the birth rate, it is an expression of a biological loss of the group.

Besides the urge for expansion in the vital sphere, the will to live is in the social sphere the will to maintain peace

and order in the group, to achieve or obtain security, and, when possible, to obtain power and wealth.

Yet, the group, acting like a strong master, often inconsiderate, rude, brutal, cruel towards individual interests, demanding even the sacrifice of human life, has no collective soul, no group mind, is no super-person. The group in its social unity is felt only in the minds of its individual members. A group is neither the sum of the persons forming the group nor a substance per se. It is a Unity in Actuality. The group is within the individual members.

Man is "zoon politikon", a social being. The relationship between people, the social processes are both within and without the persons concerned. We are so accustomed to think in these terms "within" and "without", to take the individual as a biological unit, regarding the physical limits as absolute limits between the personal and the social sphere, that we have not yet suitable words to describe the phenomenon properly. There is not really an "inside" and an "outside". The ego and the social universe are not closed towards each other, but open like—shall I say—an open verandah towards a garden, or like a boat on the ocean.

The Ego enlarges to a We, the We is born in the Egos. The unity of the group consists in the feeling of "We" of its members. As group members people are bound together in a specific way. This "spezifische innere Verbundenheit" is fundamentally different from combining for some practical outside purposes. Being spiritually bound together in a specific way is the essence of the group, the fundamental law of its life.

Out of the feeling of We, the identification with the group, develop group pride and group shame, group honour, social responsibility, mutual aid within the group, all the various forms of group spirit which have reality and possess a specific character as social phenomena.

But people never live a complete herd life. It is an error to believe that in primitive societies there are only group matters and no personal matters. An integral community of

people who are completely identical with each other and with the group, does not exist. It is against human nature.

Though the group is in the mind of the people, all persons feel group matters as such, and have besides a certain private sphere. Personal matters may concern the group or arouse group interest. But there is always a differentiation, and it depends on the character of the group or society how broad or small the private sphere is.

The group spirit is not always conscious and not always active in the people. It is potential and is actualised by certain situations. In times of peace and under good social conditions, the citizens of a country follow their own personal interests. But in times of stress they become group-minded. This is why in periods of war, of national pressure and danger, the waves of patriotism go high. When the welfare of the group is in danger, group spirit becomes a strong power, otherwise it rests as a latent force in the individual group members. But when individualism rules supreme, and the group spirit is weak, the group, as a group, is doomed to death. In a strong group communal matters are more important than personal matters or, at least, they may become more important when the welfare of the group demands it.

The group declares as group matters only what cannot be satisfactorily handled by individuals or sub-groups. Personal interests are not egoism pure and simple. The self-assertion of the individual, the ego, is part of human nature and as necessary to man as the development of group spirit. From a subjective aspect, group members feel themselves as part of the social universe. It is a state they live in. The objective perspective shows that group life as such is full of determination. It has its own sense and meaning. One essential characteristic of social life is its Wholeness (Ganzheitlichkeit), in the meaning of Gestaltpsychology. A formation is a whole when every process in it is determined, or partly determined, by the whole. Another important quality of group life is Individuality (Eigenleben). Social units have their individual character. They have their norms,

customs, laws, style, order, their history, their type of life and development and so on. Every existing group differs from all others, just as persons do. But they all possess typical forms and expressions of their group individuality. These are moulded in the Group Order of Life (Lebensordnung der Gruppe).

One of the fundamental qualities of man is a Sense of Order, a desire for form and regulation in life. Even people who meet on a walking tour, in a train, in the dining room of a hotel, give their being together some form or shape ("Gestalt"), a certain structure ("Gliederung"). The smallest groups have their code, rules, statutes or other forms of order. Custom (better "Sitte") is the group order in tribes and in many societies. The State has its group order in the form of law. The sense of form and order is stimulated by the love of the group and a longing for perfection. The noblest realisation of a group's ideal of form is a Style. Very well integrated, strong groups develop a style which as a creative norm penetrates every sphere of life.

The group order of life is of normative character. It is not always formulated as in the Ten Commandments or the Roman Law. People usually are not conscious of it. Nevertheless, they live in it and by following their customs, traditions, conventions, they live it. Conflict situations are often necessary to make them aware of the existence of group norms.

Vierkandt is very interested in finding the fountain-head of group order. The stratification of the group (Gliederung der Gruppe) is made possible by the partly innate and partly acquired inequality of men. People are able and willing to behave differently, to distinguish between persons. It is well known that already amongst certain animals a social Order of Rank develops wherever two or more of them are together. The human Order of Rank develops in a stream of subconscious understanding between individuals.

It is a basic condition for the normal functioning of group order that people should have a right assessment of each

other. This assessment is only to a small degree the result of logical inference from known and testable abilities, the knowledge or achievement of the other person. Much stronger is the power of emotional evidence. The impression a person makes upon others is of great influence upon their attitude towards him. People sense each other. Vierkandt in his latest book[1] gives the heading "Fuehlung" to the chapter dealing with the world of physiognomic understanding, by voice, gesture, posture, movement and other expressions.

The subconscious process by which people regulate their relationships to each other, give and take their places in the social field, like players before the game starts, is continuous. There is an interplay of the spontaneous direct order of rank which is perpetually regenerated, with the conventional and recognised social order of rank, such as relationships between old and young people, master and servant or slave, sovereign and subject, men and women, according to the respective society or group.

Of fundamental importance is the difference between those who act and those who are spectators in group life. The influence of the spectator on the actor has often been regarded from an individual-psychological aspect. It must also be understood from a sociological perspective. The individual does not guard the morals and customs of the group because he has considered and approved of them. It is the group opinion which presses the person into action. There is an interaction between spectators and actors in social life. The spectators are the keepers of the group morals and norms; they protect the group order. It is more than public opinion; the group order of life is impersonated in the spectators.

The persons who form the audience show a tendency to raise the group standards; they go often so far as to idealise group norms. Spectators are not perturbed by personal conflicts and have not to overcome them. So they are more

[1] Alfred Vierkandt, *Familie, Volk und Staat in ihren gesellschaftlichen Lebensvorgaengen. Eine Einfuehrung in die Gesellschaftslehre.* Ferdinand Enke Verlag, Stuttgart, 1936.

capable of keeping high standards, and they often succeed in lifting the standard of action of the people concerned. But the people who to-day look on and do not tolerate any laxity, may to-morrow be involved in a situation of conflict and become in their turn the actors who are watched by others. Thus group members, by judging and criticising their fellows, forge the chains of group norms they will have to carry themselves. It is clear, therefore, that, strange though it may seem, group norms generally develop from the standards of the people who look on, the passive spectators, rather than from those of the individuals who actually experience a social conflict.

If the simple fact of having others watching and knowing is not sufficient to keep a member within the bounds of the group order, disapproval is expressed in numerous ways. It may be "read" in the eyes of people, felt in a shake of the hands, it may speak clearly through an "icy atmosphere". It can take the form of avoiding a person, of teasing, of ridiculing. Finally, open breaches of the group order are punished by the group. Punishment is an element in group life, necessary to maintain social norms of behaviour.

The group order of life does not suddenly come to the individual, as an outside factor, demanding adjustment and obedience. Koehler said of the chimpanzees: "An isolated chimpanzee is no real chimpanzee." This means more than the fact that chimpanzees are gregarious and want to be in company. They cannot develop their true character without the influence of their group. The same is true of men. The "natural individual" does not exist, he is a fictitious abstraction. Man is always a historical being, a product of development. In the social and spiritual universe, the group, not the individual, is the unit.

The main characteristics of group life, those which remain stable throughout changing generations and periods, are certain lasting attitudes and forms of behaviour within the group. The group individuality manifests itself in what is called the "objective spirit", containing the group culture in

all its forms of expression, ranging from simple conventions of daily life to the character of philosophical thinking.

The individual subject is drawn into this super-individual, objective texture, and usually serves it without noticing his dependency. Education is the great process by which this is achieved. It is the basic service of society, it is always a process of the socialisation of individuals. Through education, the continuity of the group order of life is assured. Mothers teaching their infants how to behave in daily life, boys in the initiation ceremony of their tribe learning the group morals and code of behaviour, children attending Sunday school, students studying Shakespeare or debating political questions, are example of the conscious and still more the unconscious education which is always integrating the group order of life.

The plasticity and elasticity of the individual corresponds to a certain plasticity and elasticity in the group order. The objective and the subjective spirit are in permanent commutation. One is essential for the other and in their interplay consists the actual life of the group. But the objective spirit is superior in variety and depth. It is the store into which all individuals pour their gifts, and on which all members draw.

The idea of the unity of the group must not be exaggerated. The group is not a person "written large". Group life is built up on differentiations, tensions, contrasts within the group. What actually goes on is that an order, satisfying a variety of needs, often equalising opposite tendencies and interests, is created and maintained without any conscious direction. Take as example Language. It is a system, a structure, created by nobody, developed in and by group life. Every language has a life of its own. While it depends on the existence of the individuals who use it, the language gives them at the same time rules for their expression. There is something mysterious about this, and modern Philosophy fortunately has taught us again the beginning of all Philosophy: to wonder.

Vierkandt has not written a sociological history of mankind as other Sociologists have attempted to do; but of the nineteenth and twentieth century he has given us a fine and deep sociological analysis.[1] He deplores the effect of Rationalism, Capitalism (meaning economic Rationalism), Individualism (Autonomy and Anti-Traditionalism) and Functionalism (Sachlichkeit) on social life and shows the urgent need for a strengthening of group values, for integration. Vierkandt's other work is given to the understanding and describing of enduring types of social life.

A classification of social units is possible from different aspects and in different categories. One is the distribution and order of authority and power in the group. From this point of view, Vierkandt differentiates between "genossenschaftlich" and "herrschaftlich". A tribe led by a chief is "genossenschaftlich". The power is about equally distributed, the leader is *primus inter pares*. Authority is to a large extent a matter of personality. The "gesellschaftliche Organisation" par excellence is the State, every political organisation, every hierarchy. The power is not equally distributed. Authority is organised. There may be a single tyrant, ruling over powerless subjects or slaves, there may be one of the various forms of aristocracy, there may be "Staende" (States) based on a division of social functions and values, there may be a kingdom, or a republic, trusting the power to an organised Government—Vierkandt's interest in all the variety the history of thousands of years has laid before our eyes, is in the interdependence between group order and group ethos, the attitude of the individual members towards social values, the kind of group spirit and group relations belonging to the different group orders.

Two main types of order are "Gemeinschaft" and "Gesellschaft" (Integral Community and Society, primary and secondary group). Vierkandt does not regard them as two

[1] See Vierkandt's article on "Kultur des neunzehnten Jahrhunderts und der Gegenwart" in the *Handbuch der Soziologie*, edited by Alfred Vierkandt. Ferdinand Enke Verlag, Stuttgart.

definite and separated patterns of social life, but for him they represent a polarity. In complete "Gemeinschaft" people feel themselves identical with their group, with hardly any differentiation between Ego and group. The members are bound together in a direct way, from ego to ego, "Ichverbundenheit". In "Gesellschaft" (Society)—the opposite pole of the scale—individuals are combined by an external order, "Ordnungsverbundenheit". According to the nearness to or remoteness from the extremes, the variety of social forms can be graded as "Gemeinschaft", "gemeinschaftsnah", "gemeinschaftsfern", "Gesellschaft" (primary group, near to primary group, remote from primary group, secondary group).

"Gemeinschaft" is older than "Gesellschaft", which is a rather late development of highly complicated civilisations. Ancient times have shown more creative abilities in social life than modern times. We are, so to speak, still living on the social forms developed in mankind in its early childhood. Family, local group, religious group, political organisation seem to be permanent expressions of men's social needs and forces.

Vierkandt's latest book deals with the three great archetypes of social life: "Familie, Volk und Staat", Family, "Volk" and State. The family is essentially a unity of the blood, but Vierkandt fully appreciates the importance and values of family life in all its functions, and views with apprehension the undermining influences of modern society upon family life. "Stamm" is for Vierkandt a lower, "Volk" a higher unity of culture. The State is a political unit with a specific character. Its group order is characterised by organisation.

The small book is more than the title reveals. It is an introduction to Sociology generally and contains some of Vierkandt's finest and wisest reflections, especially a short analysis of three antinomies in reality which are essential for group life.

The first antinomy is the permanent tension between group and individual, group matters and personal matters.

This is a most important factor of social life, and of human life as a whole. Group interests and personal interests are opposite tendencies. Their spheres are not clearly defined once for all; they do not exist quietly side by side. Each of them tends to expand into the other, and they are in constant struggle with each other. Should one of these tendencies alone conquer the whole field, group life would be severely disturbed or even made impossible. Without individual energies there is no initiative and no independent spirit; without these forces there is stagnation of social life. On the other hand, unrestricted individualism would dissolve group life, and as the group, and not the individual, is the medium of the objective spirit, there would be no progress and no history. The conflict between individual and group is necessary for the whole, it is a true dialectic, a living antinomy.

A second permanent tension exists between the will to lead and the readiness to follow. The cue is dependent upon the other, and for the benefit of the group, they must find the right proportion to each other. Here, again, overbalance on one side causes serious damage to the group. An overriding will to lead amongst people threatens the unity of the group. The opposite, a general submissiveness and passive obedience, enervates and cripples the group strength and may lead to the group becoming victimised by outside groups or individuals.

The third and perhaps deepest antinomy in group life which expresses itself in many forms, is that between the group's urge to live and the group's order of life. The urge to live is a force, constantly striving for movement, change, development, expansion. Life is a process, and the urge for life sets this process going. It is an inarticulate urge, it is force, not form. But in human life all activities demand a form, as a stream demands a bed. Creative forces can express themselves only in objective form. They become objectified through the medium of material and norm, be it a book, a programme, a work of art, a social movement, or in other

forms of expression. The "objective spirit" is part of the group order of life—and thus the group's urge for life is continually transformed into order of life.

But the group's urge for life is never quite satisfied with the shape in which it has been caught, while the group's order of life has an intrinsic tendency to persist, to remain static. The conflict between the urge for life, always striving for change, and the order of life with its conservative tendency, is at the root of the historical process. Under normal conditions, the group order has a certain elasticity, and adjusts itself, at the end, to the changing demands. When the group order is very strong, the authority of tradition prevents any progress. The group is conservative. When the group's urge to live is powerful, but cannot express itself in the existing group order, there may be a revolution. The group order is overthrown and a new one created.

One example of the antinomy between the group's urge for life and the group order of life which is found in national and international political life, is the conflict between power and law. Power represents political urge for life. Law is the organised group order of the State. Wherever they are at variance with each other, a closer examination of the underlying causes is the only method which can lead to an understanding of the situation.

This last remark gives the key to a general deep appreciation of Vierkandt's sociological work. It is neither a system nor a theory. It is an interpretation of social reality. It opens our eyes to social phenomena and problems. It fulfils the highest aim of Philosophy, for it helps us to a truer understanding of life.

SOME REMARKS ON EDWARD MacDOWELL.

By Paul C. Squires.

The man who wrote the Keltic Sonata was a striking combination of masculine and feminine elements, of feeling contrasts. Nor need one turn from the great chordal passages of the heroic exordium of the Keltic to such a nature pastel as To a Wild Rose, founded upon a melody of the Brotherton Indians, in order to find these oppositions. For what could be more nearly in the spirit and mood of pure and undramatic lyricism than the twenty-four opening bars of the second movement of this sonata, marked "With naïve tenderness"? And note how magically, through the use of D sharp and its enharmonic E flat superimposed upon the tonic G, the movement evaporates pppp.

Like Cesar Franck, MacDowell early evinced talent in the pictorial arts. Those who are acquainted with even the simplest facts of the life story of this great American will remember how a painter of the Ecole des Beaux Arts tried to lure him away from music by offering him free tuition for three years, with all expenses paid. And the young boy, so liberally endowed as poet, painter and musician, wavered for a while in the final selection of a career. Are not his powerful visualising tendencies and capacities indicated at the outset?

In no sense, however, a child prodigy—although he manifested a definite bent toward musical composition at eight years of age—he was slow in coming to a realisation of his creative gifts. His was the sin of self-depreciation. Raff performed the service of urging him onward by saying, "Your music will be played when mine is forgotten."

MacDowell was a master in the realm of ideal suggestion. His was not an approach to anything like a literal programmism. He always made it clear that he sought to make

his music "more a commentary on the subject than an actual depiction of it". So he says: "Like the third, this fourth sonata is more of a 'bardic' rhapsody on the subject than an attempt at actual presentation of it, although I have made use of all the suggestion of tone-painting in my power—just as the bard would have reinforced *his* speech with gesture and facial expression."

Expert in the technique of tonal suggestion and indefinite colouring, he was not, however, like Debussy—a fellow student of the early Paris Conservatory days—a devotee of the fetish Colour. In one of his Columbia lectures we read: "Overwhelmed by the new-found powers of suggestion in tonal tint and the riot of hitherto undreamed of orchestral combinations, we are forgetting that permanence in music depends upon melodic speech. . . . In my opinion, it is the line, not the colour, that will last."

Emphasis, then, is upon the sketch, the outline, the contour; colouring, although so seductive, must not be allowed to drag us down to the region of the Lotus-Eaters. No matter how entrancing the colour, the 'atmosphere' of the moment may be, MacDowell is never deflected from the prime consideration entailed by the horizontal aspect. Yet, he makes clear: ". . . . harmony is the shadow language of melody; and just as in speech this shadow language overwhelms the spoken word, so in music harmony controls the melody." That is to say, *harmony is context.*

MacDowell expounds the thesis that music is the "nearest psychologically complete utterance of emotion". Melody corresponds to the sensuous aspect, while rhythm represents will, intention, power, act. The heroic is the outstanding phenomenon of the emotional life.

His commentary on Bach is illuminating. He reveres him as "one of the world's mightiest tone poets". Bach "accomplished his mission not by means of the contrapuntal fashion of his age, but in spite of it. The laws of canon and fugue are based upon as prosaic a foundation as those of the rondo and sonata form; I find it impossible to imagine their

ever having been a spur or an incentive to poetic musical speech. Neither pure tonal beauty, so-called 'form', nor what is termed the intellectual side of music (the art of counterpoint, canon, and fugue), constitutes a really vital factor in music. This narrows our analysis down to two things, namely, the physical effect of musical sound, and suggestion."

As to form, he teaches that this should be nothing more than a "synonym for coherence". He had no patience with formulas; the poetic idea underlying the music is for him the always and ever controlling genie. When once the realisation comes over us that coherence is the only necessary and universal formal requirement, creative inhibitions are released. "For what", says the composer, "is the symphony, sonata . . . but a remnant of the dance form? The choric dances of Stesichorus and Pindar came strangely near our modern forms, but it was because the form fitted the poem. In our modern days, we too often, Procrustes-like, make our ideas to fit the forms. We put our guest, the poetic thought, that comes to us like a homing bird from out the mystery of the blue sky—we put this confiding stranger straightway into that iron bed, the 'sonata form', or perhaps the third rondo form, for we have quite an assortment. Should the idea survive and grow too large for the bed, and if we have learned to love it too much to cut off its feet and thus *make* it fit (as did that old robber of Attica), why we run the risk of having some critic wise in his theoretical knowledge, say, as was said and is said of Chopin: 'He is weak in sonata form!' "

The poetic motivation is everywhere evident in MacDowell's music. Pantheistic at heart, nature had for him an animistic meaning; his world was filled with the figures out of the fairy tales and legendary lore that he loved so well. And when this man of large soul was so tragically struck down by the insidious brain disease that ended his career just when he was looking forward to years of creative activity in the larger orchestral realms, his chief delight was to turn over the leaves of a volume of fairy stories.

Superlatively imaginative, he protected his enchanting images and phantasies as though they were living things. Intensely personal, individualistic, he nevertheless experienced feelings that were cosmical in their import. Beethoven, that Zeus of the musical Olympus, has given us the Funeral March of the Eroica, saturated with the murky hues of an intellectual sorrow, a fitting tribute to the great departed of this earth, to captains and kings. MacDowell, in the Dirge from the Indian Suite, shows us no pomp or panoply, no ritual of Western civilisation: simply the outpourings of a savage mother in the vast primeval wilderness for the loss of her son, yet expressing the woes of all humanity. Elemental in intensity and sincerity, the Dirge ranks among the world's masterpieces.

What, now, of MacDowell's procedure when composing? We know that he kept sketch books, especially for use during the summer vacation. Usually he managed to write at least a few bars every day. It was his firm belief that the technique of composition deteriorated as rapidly as that of instrumental execution if permitted to go for weeks and months unexercised.

One cannot, however, help calling to mind at this point the case of Wagner, who seems to have written no music for the six years and more between the completion of Lohengrin in August of 1847 and the beginning of the Rheingold in October of 1853. Of course, he was during this long interval occupied with writing the text of the Ring, and no one can say in how far he may have been mulling over musical ideas. But we are certain that the *recording* of his musical thoughts and images suffered an interruption during this length of time: which makes his achievement all the more wonderful.

A pianist of high accomplishments, MacDowell found improvisation an important source of inspiration. Also, as for Chopin, the piano furnished him with an experimental laboratory. Gilman relates: "Sometimes he tried over a few measures . . . as many as fifty times, changing the value or significance of a note; as a result, his piano writing is almost always 'pianistic'. In one respect he was sometimes careless:

in the noting of the expression marks. By the time he arrived at that duty he was usually tired out. For this reason, much in his printed music is marked differently from the way he actually played it in concert. . . . He was profoundly absorbed when at work, though not to the extent of being able to compose amid noise and disturbance. He needed to isolate himself as much as possible. . . ." It is true that MacDowell sought the greatest possible quiet when composing, and the closest contact with nature. The arrangements in his Peterboro house, and the log cabin, show this. But we must not forget that he wrote a large portion of the Second Modern Suite for piano while commuting twelve hours a week between Darmstadt and Frankfort.

While in Germany, he had the enviable opportunity of reading over his scores with the obliging Cur-Orchesters. These practical trials enabled him to iron out many rough spots and obtain an insight not otherwise to be gained. Lamia, his third orchestral work, did not find publication for twenty years, because at the time of its writing the composer was not able to obtain a preliminary hearing of it and was uncertain as to the effect. Noteworthy and most interesting is the fact that MacDowell, for all his love of ethereal, lofty, spiritual colouring, never once used the harp in his orchestral compositions. Imbued as he was with the old bardic mood and the sagas of the Northland, it is strange that this instrument did not, by the very force of the association of ideas, powerfully appeal to this man of so poetic temperament. One would think that he would have demanded it. He certainly rendered *verbal* tribute at least when he wrote of the harp being so closely connected with "impassioned speech, which . . . is the highest expression of what we consider godlike in man".

There is no difficulty in understanding why the harp is not in the Indian Suite; for such a subject it would have been ludicrously inappropriate. But that MacDowell felt no need of it in such a score as Lancelot and Elaine, is a veritable psychological puzzle. Although the harp is and

has been constantly diatonic at the core, this fact has not prevented its generous use by the leading exponents of chromaticism. When we recall that such colourists as Rimsky-Korsakoff and Debussy have drawn extensively upon the services of this instrument, it is entirely improbable that MacDowell ignored it because of its essentially non-chromatic character.

Elaborately painstaking in the physical drudgery of composition, he did not, as a rule, cease work on a piece until it was completed or finally put aside. His ideals were so far above the level of his accomplishment that he habitually suffered from a state of depression upon finishing anything. He was never able to shake off a lurking distrust of his powers: although he possessed uncompromising artistic convictions and never hesitated to express them.

On occasion MacDowell could compose with remarkable speed. The best instance of this is the First Concerto, which was put into shape—under the pressure of rather amusing circumstances in which Raff played the rôle of 'demon'—in the course of some two weeks, when he was only nineteen years old. The sole change thereafter made was in three lines of passage work in the first part. The rapidity with which this piano concerto was produced is reflected in its fluidity and evident freedom from too many nagging doubts.

MacDowell's piano music is heroically 'muscular'. The manual dynamic pattern of the composer is stamped in bold lines on almost every page. The last two sonatas, especially, abound in material that would have done credit to the mighty grasp of Anton Rubinstein. We should not fail to recollect that it was due to hearing Nicholas Rubinstein play Tschaikowsky's B Flat Minor Concerto that MacDowell determined to leave the hidebound Paris Conservatory. Said he: "I never can learn to play like that if I stay here." The orchestral sonority of his keyboard creations emanates directly from the physical type to which he belonged; he is no mere imitator of the Lisztian technique. He makes his own property a certain sweep and breadth and power of attack

with its tense dotted-note rhythms which moves us to exclaim at once, That is MacDowell!

Tschaikowsky fascinated him. We have many times wondered whether the opening bars of the Eroica Sonata unconsciously reinstate the Russian's Romeo and Juliet overture. In mentioning this sonata it is of decided interest to bring out a fine illustration of the power exercised by the visual domain upon the tonal imagination, for the composer remarks: "The Scherzo was suggested by a picture of Doré's showing a knight in the woods surrounded by elves."

Of Wagner he said: "His music-dramas, shorn of the fetters of the actual spoken word, emancipated from the materialism of acting, painting, and furniture, must be considered the greatest achievement in our art." MacDowell is careful to explain his precise position on the music drama: "But as regards representing the highest development of music, I find it too much hampered by the externals of art, necessary materialism in the production of palpable acts, and its enforced subjection to the laws that govern the spoken word. Music is universal; Wagner's operas, by the inherent necessities of speech, are necessarily and irrevocably Germanic. . . . 'Good-bye, My Dearest Swan' invests part of Lohengrin with a certain grotesque colour that no one would ever dream of if there were no necessity for the singer to be tied down to the exigencies of palpable and certainly most materialistic language. The thought in itself is beautiful, but the necessity for the words drags it into the mud. This certainly shows the difference between the language of music and what is called articulate speech, the purely symbolic and artificial character of the latter, and the direct, unhampered utterance of the former. Music can invariably heighten the poignancy of mere spoken words (which mean nothing in themselves), but words can but rarely, in fact I doubt whether they can ever, heighten the effect of musical declamation."

All this may sound rather startling in view of MacDowell's chief thesis: the primacy of the poetic idea and its controlling influence upon his musical production. Yet we

believe that there is no real contradiction here at all. When he speaks of the poetic idea he means not a particular sequence of words, which are to be *set* to music, but rather a mood, a totalised feeling state, that occupies a highly plastic frame and automatically, as it were, evokes its own—and almost inevitable—translation into tone. Words and music should never be 'harnessed' to one another. Music must be allowed to flow free and untrammelled if the poetic message is to be successfully conveyed. In his teaching and artistic practice MacDowell unceasingly demonstrated his conception of the musical suggestion which he designates "ideal". "To my mind, it is in the power of suggestion that the vital spark of music lies." He asserted the term 'tone-painting' to be "somewhat unsatisfactory". His capacity for concentrated emotional expression is fully shown in To the Sea, only thirty-one bars in length. But to dub him a 'miniaturist', as some have done, is to commit one of the most clumsy blunders imaginable: the measurement of musical content and worth by the number of pages. Just call to mind the Chopin Preludes.

Preeminently an original mind, MacDowell never hesitated to declare himself on historical matters. For instance, he slashes into those critics who consider it the proper and respectable thing to talk of Mozart as learned. There is an especially choice passage in the Lectures wherein he says: "All over the world we find audiences listening suavely to long concerts, and yet we do not see one person with the frankness of the little boy in Andersen's story of the 'New Clothes of the Emperor'. . . . Let us have frankness, and if we have no feelings on a subject, let us remain silent rather than echo that drone in the hive of modern thought, the 'authority' in art."

His views on nationalism were very definite: "So-called Russian, Bohemian, or any other purely national music has no place in art, for its characteristics may be duplicated by anyone who takes the fancy to do so. On the other hand, the vital element of music—personality—stands alone." A little further on he makes a memorable statement: ". . . we have

here in America been offered a pattern for an 'American' national musical costume by the Bohemian Dvořák—though what the Negro melodies have to do with Americanism in art still remains a mystery. Music that can be made by 'recipe' is not music, but 'tailoring'. . . . Masquerading in the so-called nationalism of Negro clothes cut in Bohemia will not help us."

Discussing the problem of melodic line, MacDowell expresses himself as follows: "To the straight line of purity in art the tinge of orientalism, the curved line of emotion, brings the flush of life, and the result is something which we can *feel* as well as worship from afar. . . . This orientalism, however, must not mask the straight line; . . . it must help to illustrate the thing itself."

MacDowell goes on at once to explain that when this orientalism takes on such an importance as to distort the "straight line of pure music, then we have national music so-called, a music which derives its name and fame from the clothes it wears and not from that strange language of the soul, the 'why' of which no man has ever discovered".

A truly great American—supreme in his land's musical history—Edward MacDowell's spirit continues to beckon his countrymen toward lofty goals not only in the tonal realm, but also in the allied creative domains of painting, sculpture, and literature. We see the unique Colony at Peterboro. From the woods and fields of that consecrated spot in the New Hampshire hills goes forth year by year the courageous gospel of faith in a better order of things amidst a grossly materialistic era which finds the few in a death-grapple with the herd for the life of their artistic ideals. The Colony is a powerful force in the conservation and stimulation of those aspirations so essential to the realisation of genuine national greatness.

Thus lives on, in the ever-green splendour of his bardic poetry, like his beloved pines, that nobleman of nature who so wholly devoted himself to the cause of art. We inevitably think of what the Master of Bonn once wrote: "If you wander

through the mysterious fir-forests, think it was there Beethoven often poetised, or, as it is called, composed."

Unafraid to express his convictions in word and tone and act, MacDowell represents the highest form of American individualism, utterly refusing to be absorbed by the many-headed masses, his eyes steadfastly directed upon the eternal verities.

A house of dreams untold—
It looks out over the whispering tree tops
And faces the setting sun.

REVIEWS.

Spinoza nel Terzo Centenario della Sua Nascita. Publicazione a cura della facoltà dell' Università del Sacro Cuore. Società editrice "Vita e Pensiero". Milano, 1934; pp. 210. Twelve lire.

This volume, written by various Italian Roman Catholic philosophers, but principally by members of the faculty of philosophy in the University of the Sacred Heart, sets out to evaluate the significance of Spinoza in the history of philosophic thought, and, more precisely, to indicate how Spinoza, along with Kant and Hegel, "caused philosophy to deviate from that path which alone leads to the knowledge of God and which the perennial philosophy has so luminously indicated" (p. 5). The essays which constitute the book are concerned with various particular subjects, Spinoza being related to Nicholas of Cusa, Kant, Hegel, Schopenhauer, modern physics and contemporary idealism in separate essays, while there are also discussions of the doctrine of "diretto come potenza" in Spinoza, and some consideration of the significance of his life for his thought. Vanni-Rovighi's comparison of Spinoza's theory of substance to the Thomistic, however, strikes the keynote of the volume. The object is to indicate just where Spinoza departed from scholastic doctrine and, in consequence, fell into error.

This is a task which is important for scholasticism, to distinguish itself carefully from monism, especially since an emphasis on one side of Christian dogma alone, the doctrine of "Him in whom we live and move and have our being", might lead us to believe that Christianity is itself monistic in character. In these days, of course, the challenge which Spinoza hurled against the orthodox appears of less pressing consequence than that of materialists who could not conceivably be described as God-intoxicated; but it contains elements which are a perpetual source of danger to a dualistic theology. The scholastics see clearly that any compromise on this point is impossible: "Certainly, notwithstanding such a powerful

striving towards the transcendent, notwithstanding the mystic afflatus of Spinozism, God is not to be discovered again from Spinoza. On the contrary, God is dissolved, because logically pantheism is, more or less disguised, nothing else but atheism. The personal human soul, which must be the subject of the conquest of God, is also dissolved in the one-in-all. Spinoza, nevertheless, in spite of the pride of his pantheistic conception, is not an atheist; his system is as close to God as pantheism can be" (p. 5). Spinoza, then, is not beyond all possibility of salvation, he adheres to the right side, but his system is nevertheless thoroughly atheistic in tendency. Their dualism permits the scholastics to adopt an appromixately realist position on certain points—they recognise distinctions which do exist, even if they also maintain distinctions which do not exist—and by reason of this fact Gemelli, for example, is able to direct some fairly sharp criticisms against Spinoza. He can point out, for example, that on any attempt to reduce the many to the one we are left with an unexplained residuum of illusion. Gemelli argues that "the true problem, the great mystery of Spinoza's metaphysics is not God but the world, not the eternity of the human spirit, but birth, life, death; not the demonstration of God from the world but the procession of the world from God" (p. 3). What we might suggest, however, is that while the movement of things from God might be a source of special difficulty to Spinoza, yet grave problems also attach to the demonstration of God from the world; and, particularly, that the argument is vitiated in both cases by the false doctrine of substance which Spinoza shares with the scholastics. It is argued in this volume, however, that he is led astray not by the theory of substance, as Aquinas understood it, but by a false conception of the relation of substance to attribute. He is wrong, Vanni-Rovighi argues, in considering attributes as expressing substances, instead of as being aspects of substance, and it is this error which leads him to think that two substances could have nothing in common. Both views, however, can be confronted by serious criticisms; and certainly if substance is pure individuality (or form) it can rightly be inquired how it can have attached to it any attributes which

also occur in other places without its substantial individuality being infringed. The real point, of course, is that the doctrine of substance and attribute is a false one; but Spinoza at least saw difficulties in the traditional view, and it is of no avail merely to repeat that traditional view against him.

In connection with substance, there is at least some attempt to argue that Spinoza has become confused between the nature of substance, and the modes under which we, as imperfect beings, can alone know it; but what is almost incredibly naïve is the attempt to argue that all Spinoza's difficulties can be overcome by the employment of the conception of creation, without any hint being given that this doctrine carries difficulties in its train, or has been rejected by Spinoza just because he thought he saw certain difficulties in its employment. The doctrine of creation, in fact, merely attempts to solve its problems by asserting that there is a solution; that novelty can occur because there is something in the cause which enables it to occur. And in the last resort, in maintaining that the effect is represented *in potentia* in the cause, it is really bound to deny the appearance of novelty just as definitely as does the theory of comprehension (that the effect is "comprehended in" the cause). Spinoza could see how the traditional view oscillated between asserting the independence of the effect (to maintain the whole apparatus of prayer and redemption) and the dependence of the effect (to ensure God's position as omnipotent and the sole final cause). If it is true that he could not develop his position without employing the conception of causality as creation, it is equally true that the scholastics have to employ causality as comprehension; and Spinoza at least had the merit of realising the inconsistency of these two positions.

Similarly, to claim that Spinoza has recourse to ontology whereas the cosmological argument is the basic one, without paying heed to Kant's contention that cosmology implies ontology, or again to maintain against Spinoza's ethics that it identifies "the order of values and the order of reality" (p. 151) or that "by founding right on power, it places right on the weakest and most relative of bases, because force is

by its nature changeable . . . and right must always follow the varied conquests of force" (p. 153), demonstrates a naïve acceptance of scholasticism which culminates in a complete inability to appreciate the heretic's point of view. For all their acuteness on particular points, then, the scholastics always stop criticising just where criticism is needed, and expound as a complete demolition of a particular theory what is merely a repetition of the very position the theory is assailing.

J. A. PASSMORE.

A BIBLIOGRAPHY OF ÆSTHETICS AND OF THE PHILOSOPHY OF THE FINE ARTS FROM 1902 TO 1932. Compiled and edited by W. A. Hammond. Longmans, Green and Company. New York, 1934; pp. 205.

This bibliography of æsthetics was originally issued as a supplement to *The Philosophical Review,* and has now been reprinted with additions and revisions. It forms the first part of a projected bibliography of all philosophic works (including reprints) published since 1902, this date being chosen because Baldwin's "Dictionary of Philosophy" is satisfactory up to that point. To meet "the needs and desires of the philosopher of art" is its professed object, so that it does not concern itself especially with the technical peculiarities of the particular arts, although it does list a considerable number of books which fall into the latter category.

On the whole, the bibliography can be said to fulfil its task admirably; although any reviewer is bound to find in such a bibliography both inclusions and omissions which he feels to be unwarranted. The editor expresses the conviction that "we must look to psychological experiment, to controlled introspection and to the scientific study of art objects for the solution of the central problems of æsthetics, if they are soluble", so that the prospective philosopher of art finds himself confronted by essays "On the Associative Power of Odours" and "The colour preferences of five hundred and fifty-

nine full-blood Indians". On the other hand, the psycho-analytic school of criticism is but sparingly represented. Of more importance is a too rigid insistence upon purely professional work. Important studies like Norwood's "Euripides and Shaw" and the essays of men like Cabell, Aldington, Eliot are not included, although their relevance for the philosopher of art is far more direct than any physiological tinkerings in the laboratory.

On the formal side, the entries are divided into various subject sections. While such a division facilitates reference to some degree, some of the discriminations made in the bibliography are so fine as to cast considerable doubt on the applicable section (e.g., the division between "Style" and "Poetry and the Æsthetics of Literature"). And what is one to say of "Romanticism; including Realism and Naturalism", when Impressionism receives a separate heading? Difficulty is, however, inseparable from any single-entry classification and is offset to some degree by the index of authors' names and names referred to which is appended to the volume. One would have liked as well an index of subjects, in view of the inadequacy of the general divisions of the bibliography.

J.A.P.

TOWARDS HERODIADE. By A. R. Chisholm, B.A. Melbourne University Press in association with Oxford University Press; 1934. Price 6s.

This work can be described as an attempt at literary interpretation and at the "placing" of a literary movement in its cultural setting. The movement in question is that of certain French poets of the nineteenth century who "attempted to break down the plastic structure of the universe, and found behind phenomena, first an immense and incessant flux, and then a sheer void". But the interpretation of symbols in this or in any other way, while it may be necessary before literary criticism can be undertaken, is not equivalent to it, and in particular gives no ground for Chisholm's condemning the

work interpreted as "decadent" or in need of salvation. Nor can his criticism of the nihilistic philosophy of Schopenhauer, whom he presents as the immediate philosophic influence on the Romantics, be taken as justifying this condemnation. Chisholm argues that phenomena, although they are not independent existences but only objectifications of the will, are not therefore any the less real, since the will exists only in its objectifications. Against the nihilist who seeks for the true reality behind phenomena, the Christian pantheist recognises it only in its expressions, which are these same phenomena. But this is simply the recurring difficulty of monism, namely, how to explain the plurality of things as really a unity, without in the process denying the ultimate reality of the many. And in denying the validity of phenomena, nihilism appears as a more consistent monism than does Chisholm's pantheism.

Moreover, this Christian pantheism also leads to Romanticism—the endeavour to express "higher" meanings in literature. Since every phenomenon is an expression of the absolute, it has a spiritual value, or a meaning higher than its merely phenomenal occurrence. The nihilist is romantic in his attempt to break through the veil of appearance and reach the truth hidden thereby, but the pantheist is equally romantic in trying to see beyond the merely phenomenal value of a thing to its higher spiritual value. In the work of Hérédia, whom Chisholm takes as a "halt" on the way to literary nihilism, i.e., as a non-romantic who gives to phenomena their true value, this romanticism appears especially in the mirror-symbol. This symbol amounts to an attempt to present concurrent or sequent events as possessing, by reason of this sequence or concurrence, a special significance or value. As might be expected, many of the sequences are fanciful and grotesque; truth is sacrificed for the poet's sense of the appropriate, or the significant. The device of the mirror-symbol appears as a way of unfolding the higher meanings of things, and, as always, the higher meaning appears as a harmony or symmetry forced upon historical situations, the actual natural harmony or line of development being left out of account.

ALICE R. WALKER.

Possible Peace. By W. Macmahon Ball. Melbourne University Press. 3s.

As its title implies, this book is concerned to put forward remedies which in the author's view may suffice to stave off the threatening international crisis between the "have" and "have-not" Powers. It is a plea for a more thorough and a more rational consideration of the forces which are impelling the nations into warlike courses, and for possible remedies which will stave off, or even, Mr. Ball is more hopeful than many of us, indefinitely prevent the possibility of a major war breaking out among the European powers. In particular it is a plea for a sympathetic consideration of Germany's claims for a readjustment of the inequalities which resulted from the Peace treaties. He suggests, in this connection, that while it is one interpretation of Germany's recent actions in the field of foreign policy and re-armament to foresee that the Nazis are preparing to embark on a fresh programme of aggressive expansion, it may well be that it is the reaction of a nation suffering from the injustices and humiliations imposed by the treaties, which has learnt that in diplomacy the only language which diplomats understand is suavely presented demand backed by adequate force. That the German people are no more desirous of entering another war than the peoples of any other nation, is probably true. That the Nazi Party will be content, or able, to accept anything less than a thoroughgoing revision of treaties either in the colonial or the European sphere, is highly doubtful. The fate of the régime appears to be bound up with its ability to force external adjustments: anything less involves the destruction of the Party.

The remedy which Mr. Ball suggests is a reorganisation of the mandate system in which Germany shall have a just share, and so obtain access to the raw materials which are so urgently needed.

It is a suggestion which deserves more consideration than has been given it so far, but that it can serve as anything more than a palliative, as a breathing space before the next clash of interests arises, even Mr. Ball is doubtful.

His book has been written for the average Australian reader who has neither the time nor the will to embark on deeper study of the issues involved. His analysis of the international situation as it has developed over the post-war years is a useful and stimulating piece of work, and should serve its purpose in arousing this class of reader to the necessity of facing the issues involved before it is too late.

His remedies, however, are hardly compatible with the conclusions he draws himself from the analysis—we must look elsewhere for these.

It is a book which should provoke those who read such a study of international affairs for the first time to read more deeply and wisely.

J. L. J. WILSON.

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THE AUSTRALIAN INTERCOLLEGIAN. Published monthly by the Australian Student Christian Movement, 182 Collins Street, Melbourne.

NOTES AND NEWS.

THE Congress of the Association was held at Melbourne University on May 20th to 22nd. In addition to the papers announced in the last issue of the Journal, an address was given by Mr. D. Taylor on "Realism and Memory". The average attendance at the morning and afternoon sessions was fully a hundred, and each paper was followed by animated discussion. Professor Giblin's evening address on the question, "Is Democracy Possible?", attracted an attendance of about three hundred, and it is expected that the Association will benefit considerably from the series of public lectures, of which this was the first.

The special feature of this Congress was the large number of visiting students (eleven from Sydney and one from Canberra), who greatly appreciated the opportunity of comparing views in formal and informal discussions. The thanks of all visitors are due to the Melbourne staff and students for the very efficient and hospitable arrangements that were made. It is hoped that subsequent congresses will see still more representative gatherings of a like character.

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The Annual Business Meeting of the Association will be held in Sydney University on Tuesday, 15th June, at 8 p.m., when the Secretary's and Treasurer's Reports for 1936 will be presented.

At the conclusion of the meeting it is proposed to re-constitute the Sydney branch, which has been in abeyance for some years. The growth in membership of the Association among students and recent graduates should ensure the successful carrying out of branch activity, which can very usefully supplement the Association's work.